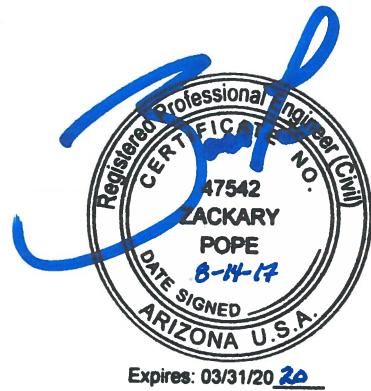




WATERLINE TANKERSLEY REPLACEMENTS

FUNCTIONAL AND ENGINEERING PROGRAM REPORT



August 14, 2017

**Town of Gilbert Project No.: WA118
GHD Project No.: 11136654**

**FUNCTIONAL AND ENGINEERING PROGRAM REPORT
FOR
WATERLINE TANKERSLEY REPLACEMENTS**

PREPARED FOR

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TABLE OF CONTENTS

1.0 INTRODUCTION	5
2.0 EXISTING CONDITIONS.....	6
2.1 PIPING.....	6
2.2 SERVICE LINES AND METERS.....	6
2.3 FIRE HYDRANT ASSEMBLIES.....	7
2.4 PAVEMENT.....	7
2.5 CONCRETE IMPROVEMENTS	8
2.6 LANDSCAPING AND IRRIGATION	8
2.7 TRAFFIC	8
2.8 WATER CUSTOMERS	8
3.0 PRE-DESIGN.....	9
3.1 LIMITED TOPOGRAPHIC SURVEY.....	9
3.2 UTILITY COORDINATION.....	9
3.3 UTILITY LOCATION	10
3.4 PERMITTING REQUIREMENTS.....	11
3.5 ALIGNMENT EXHIBITS.....	12
4.0 WATER MODELING.....	12
4.1 ANALYTIC METHODOLOGY	12
4.2 MODEL SCENARIOS.....	12
4.3 DESIGN CRITERIA AND ASSUMPTIONS	13
4.4 DEMAND SUMMARY	14
4.5 DISTRIBUTION SYSTEM MODEL ANALYSIS AND RESULTS.....	14
5.0 DESIGN	16
5.1 DESIGN CRITERIA.....	16
5.2 STATIONING	16
5.3 RIGHT-OF-WAY & EASEMENT REQUIREMENTS.....	16
5.4 WATERLINE	22
5.4.1 Sizing and Materials	22
5.4.2 Horizontal Alignment	23
5.4.3 Horizontal Deflections	24
5.4.4 Vertical Alignment.....	24
5.4.5 Connections.....	25
5.4.6 Valves	27
5.4.7 Fire Hydrants	27
5.4.8 Service Lines, Meters, and Meter Boxes	27
5.4.9 Dead-Ends	29



6.0 CONSTRUCTION SEQUENCING	29
6.1 OVERALL SEQUENCING AND PHASING	29
6.1.1 Minimizing Disruptions	30
6.1.2 Schedule	31
7.0 PRELIMINARY ESTIMATE OF COST.....	31



LIST OF APPENDICES

- APPENDIX A – Fire Hydrant Test Results
- APPENDIX B – WaterCAD Water System Modeling Results
- APPENDIX C – Table 2.5 of the 2012 *Integrated Water Master Plan* by Carollo
- APPENDIX D – Water Demand Calculations
- APPENDIX E – Parcels Requiring Additional Easement Research
- APPENDIX F – Lots on Which an Easement is Required to Serve an Adjacent Lot
- APPENDIX G – Preliminary Estimates of Cost

LIST OF TABLES

Table 3.2.1	Utility Response Status.....	9
Table 3.4.1	Preliminary List of Permits.....	11
Table 4.3.1	Demand Factors.....	13
Table 4.4.1	Water Demand Summary.....	14
Table 4.5.1	Water Pressure Summary.....	15
Table 5.4.5.1	North Water Connections.....	25
Table 5.4.5.2	South Water Connections.....	26
Table 7.0.1	Tankersley North Preliminary Cost Estimate.....	31
Table 7.0.2	ACP Replacement Preliminary Cost Estimate.....	31
Table 7.0.3	Tankersley South Preliminary Cost Estimate.....	32

LIST OF EXHIBITS

Exhibit 1	Land Use Exhibit
Exhibit 2	Tankersley North – Existing and Proposed Water System
Exhibit 3	Tankersley South – Existing and Proposed Water System
Exhibit 4	Existing Utilities



ABBREVIATIONS

AAC	Arizona Administrative Code
ACP	Asbestos Cement Pipe
AWWA	American Water Works Association
DIP	Ductile Iron Pipe
ft	Feet
ft/s	Feet per Second
gpm	Gallons Per Minute
MAG	Maricopa Association of Governments
PUE	Public Utility Easement
PVC	Polyvinyl Chloride
MCDOT	Maricopa County Department of Transportation
MCESD	Maricopa County Environmental Services Department
RWCD	Roosevelt Water Conservation District



1.0 INTRODUCTION

This *Functional and Engineering Program Report* for the Waterline Tankersley Replacement project was prepared on behalf of the Town of Gilbert under Contract 2017-2106-0540. It outlines the proposed Tankersley waterline improvements and the design criteria implemented for the project. This report also summarizes services that will be provided by GHD during the project's design phase. The contents of this report are broken into existing condition, predesign, design, and construction related topics.

The proposed project will consist of waterline replacements within the Tankersley North and the Tankersley South areas. Exhibit 1 illustrates the North and South areas and their Land Uses per the Maricopa County Assessor.

- Tankersley North is generally bound by Frye Road to the north, Higley Road to the east, Pecos Road to the south, and Greenfield Road and Santan Village Parkway to the west. The majority of this portion of the project lies within a Maricopa County island.
- Tankersley South is generally bound by Pecos Road and Mercy Road to the north, Greenfield Road to the east, Germann Road to the south, and Coronado Road (156th Street) to the west. This portion of the project falls within the Town of Gilbert.

Both areas are within the Roosevelt Water Conservancy District's (RWCD) service area.

Construction began on homes in this area in the late 1970s and development continues today. The Graystone residential community in the North Area is currently under construction and more development is likely in the future for a nearly 34-acre commercial parcel owned and managed by the Berge family of Berge Ford in Mesa.

The area was originally served by the Tankersley Water Company. After several years of service and supply issues, the Town acquired the water system in 1996. At the time of the purchase, several upgrades were required to provide water to its customers. Since that time, miscellaneous upgrades to the system have been installed.



2.0 EXISTING CONDITIONS

2.1 Piping

The Tankersley facilities are incorporated into Pressure Zone 2 of the Town's water system and tied into the waterlines along Greenfield Road, Higley Road, and Pecos Road.

The existing water system within the Tankersley area consists of 4-, 6-, and 8-inch asbestos-cement pipe (ACP) waterlines and schedule 40 steel pipe along with some newer DIP lines. The ACP has become brittle and difficult to repair. As such, the area has a history of frequent waterline breaks (approximately 5-10 breaks per year) due to the piping materials and installation methods.

Some waterlines are installed within easily accessible easements or within right-of-way, but many are installed along the back of lots on private property where maintenance access is limited. Additionally, many lines include long runs with dead ends and looping within the system is inadequate. Many of the existing waterlines share trenches with power lines.

Exhibits 2 and 3 illustrate the existing water system within Tankersley and the surrounding area. It also shows the existing ROW, improved roads on private property per Maricopa County Assessor's office, and shared driveways/roads not recorded with Maricopa County. These shared driveways/roads provide access to lots that are not adjacent to existing roadways.

According to the Town's Operations staff, the Tankersley area is on the lower end of the pressure zone and typically sees pressures between 65 to 75 psi. Fire hydrant tests were performed on June 8, 2017 and the data collected confirms these pressures. The results of these tests are included in Appendix A. Additionally, even with the long dead-end lines, water quality has not been a problem.



2.2 Service Lines and Meters

The lots within the project area are large and houses are often set back a considerable distance from the nearest street or water main, especially in Tankersley North. This creates long runs for the private service lines. Longer service runs typically require larger diameter lines (1.5" – 2") in order to reduce friction headlosses in the pipes during periods of high demand within each property.



Meter locations for all but eight properties are known. These eight meters are able to communicate with the Town's automatic meter readers via radio, however, so usage data is still collected. These meters may be behind private property or obscured in some other way. The existing meter sizes range from $\frac{3}{4}$ -inch to 2-inch while a few of the sizes are unknown. Typically, service line sizes match the meter sizes but that has yet to be verified for the Tankersley area. Additionally, several lots have existing private services that cross a neighboring property.



2.3 Fire Hydrant Assemblies

According to the Town's Operations staff, many of the existing fire hydrants in the Tankersley area do not function or have been disconnected from the system entirely. Additionally, since the diameters of the main line and branches feeding existing hydrants may be undersized, the hydrants may not produce high volumes of flow when they are exercised. There are also long stretches between hydrants that exceed the Town's maximum spacing requirements. Tankersley North only appears to have one hydrant in operation within the single family residential lots. This project will replace the existing hydrants and add new hydrants per the Town's spacing requirements with new dry barrel hydrants. Based on recommendations from Town staff, the hydrants will be

connected to the main lines with PVC branches to mitigate the risk of snapping the mains. Note that this differs from current Town of Gilbert guidelines, however, it is anticipated that this connection method will ultimately be adopted as a new standard.

2.4 Pavement

The area's existing pavement is exhibiting typical cracking consistent with its age but appears to generally be in good condition. Thickness measurements will be taken during potholing. Complete or full road width pavement replacement is not anticipated as part of this project. Additionally, several of the new waterlines will be installed within existing dirt roads. Replacements will be limited to the linear replacements required for the installation of the new waterlines. In addition to typical trench based pavement and roadway replacements, several of the area's streets include small water channel crossings that will have to be repaired when crossed.





2.5 Concrete Improvements

There are very few public concrete improvements along the alignments of the existing waterlines within the project area with the exception of occasional ribbon curb within the North and South areas and sidewalk, curb, and gutter along the project boundaries. The existing concrete improvements appear to be in accordance with Maricopa Association of Governments (MAG) standards. None of the existing concrete improvements display special construction features or concrete coloring.

2.6 Landscaping and Irrigation

The landscaping in the project varies from simple decomposed granite to more elaborate improvements that include turf, plants, trees, cacti, concrete and paver hardscape, boulders, freestanding walls, and short retaining walls.



South Greenfield Road along Tankersley South, and East Germann Road) with lower volumes along others (East Frye Road, South Greenfield Road along Tankersley North, South Mercy Road, and 156th Street). East Fairview Street bisects Tankersley North and is the busiest street in the North.

2.7 Traffic

Right-of-Way is limited throughout the North and the South and much of the traffic is accommodated by private streets. The majority of the community's roads are narrow, two lane streets. Many streets include speeds humps. Many of the homes have long gravel driveways that connect to the main streets. Traffic appears to be limited to local destinations within the developments. Traffic is heavy along several of the adjacent arterials (South Higley Road, E Pecos Road, Santan Village Parkway,

2.8 Water Customers

The majority of the area's customers are private residents. However, a handful of the residents operate businesses out of their homes and are scattered throughout. Larger scale commercial activities are concentrated on the southwest and southeast corners of the North as well as the northwest corner of the South Area. The South Area includes a clinical office for Hospice of the Valley located along its western boundary and Evo Swim School along the north. There appears to be small farming operations in the North with larger scale farming in the northeast and



southwest portions of the South. The North is also home to a school, American Leadership Academy, at the southwest corner and LifeChurch is just north of the school.

3.0 PRE-DESIGN

3.1 Limited Topographic Survey

GHD performed a limited topographic survey to serve as the basis for the design of the proposed improvements. Points collected during the survey were used to prepare the AutoCAD base drawing for the attached exhibits and water model. The horizontal and vertical control for the survey is based on Town of Gilbert bench marks. In addition to shooting the City's control points, the survey crew located the existing above grade utility site features within the area's right of way.

Additional survey will be performed once the selected alignment has been approved and the project moves into the final design phase.

3.2 Utility Coordination

GHD has contacted the utility companies that provide services within the Tankersley area. Table 3.2.1 summarizes the response status of each of the utilities.

Table 3.2.1 – UTILITY RESPONSE STATUS

Utility	Response
Arizona Department of Transportation (ADOT)	No maps within service area
City of Mesa	Pending
Cox Communications	Maps Received
CenturyLink	Supplied Some Maps (Missing some of the project area, have requested additional maps)
Kinder Morgan	Pending
Roosevelt Water Conservation District (RWCD)	Pending



Utility	Response
Salt River Project (SRP) Electrical	Maps Received
Salt River Project (SRP) Irrigation	Maps Received
Southwest Gas	Maps Received
Sprint Communications	Maps Received
Town of Gilbert	GIS Mapping Received

Exhibit 4 illustrates the existing utilities in the area based on the information received to date.

Once the project plans are prepared, they will be sent to the utility providers for their review. Each provider will be asked to notify the design team of any facilities that are illustrated incorrectly or any apparent conflicts between existing utilities and the proposed waterlines. If the provider's facilities are illustrated correctly, they will be asked to sign a clearance letter to document the findings of their review. GHD will also include any standard construction notes provided by utility owners on the construction plans.

While not anticipated, should one of the utility providers identify a conflict that GHD cannot resolve through changes in the waterline design, a meeting will be scheduled between the City, GHD, and the utility owner to discuss relocation of the utility, construction and financial responsibilities, and schedule impacts.



3.3 Utility Location

GHD's subconsultant, Ritoch-Powell & Associates, performed a preliminary site survey to identify the above ground utilities within the existing ROW. These above ground improvements have been merged with the existing utility maps and added to the base file. During the design, the GHD team will locate any additional utilities on private property or within existing easements by a



combination of locating above ground improvements, utility location via “sounding” with utility wands, and non-destructive potholing.

Pothole locations will be chosen in order to verify the locations of existing waterlines, to verify the waterline materials, and to verify the horizontal and vertical alignments of existing utilities at proposed crossing locations.

3.4 Permitting Requirements

Table 3.4.1 provides a list of permits that may be required for this project. The Design and Construction teams are responsible for identifying and obtaining applicable design approvals and construction permits. The following list is preliminary and additional permits may be required. Town of Gilbert permit fees will be waived for the construction of these improvements.

Table 3.4.1 – PRELIMINARY LIST OF PERMITS

Agency	Document	Procurement Period
Maricopa County Environmental Services Department (MCESD)	Approval to Construct	90% Design
Town of Gilbert	Engineering Construction Permit	Prior to Construction
Town of Gilbert	Construction Permit	Prior to Construction
Maricopa County Department of Transportation	Permit for Construction in County Right-of-Way	Prior to Construction
MCESD	Dust Control Permit	Prior to Construction
Arizona Department of Environmental Quality	Notice of Intent to Discharge	Prior to Construction



Agency	Document	Procurement Period
MCESD	Approval of Construction	Following Construction and Town of Gilbert Acceptance

3.5 Alignment Exhibits

Proposed conceptual water alignments are illustrated on Exhibits 2 and 3. These exhibits also illustrate existing:

- Water infrastructure to be abandoned
- Water infrastructure to remain
- Right-of-way
- Shared driveways
- Streets that have no right-of-way
- Roosevelt Water Conservation District property (South Area)
- Lots that require private easements or agreements to serve adjacent parcels with a private water service
- Lots that will require additional research into the status of all existing easements
- Areas outside of existing streets where additional Town of Gilbert easements may be required.

4.0 WATER MODELING

4.1 Analytic Methodology

GHD created WaterCAD™ models of the existing and proposed water systems. WaterCAD is a water distribution system modeling software developed by Bentley. The user inputs the water system map, waterline sizes, and demand locations. WaterCAD connects these elements as a system and uses mathematical equations to determine flow directions, flow magnitudes, and pressures for the entire water system.

4.2 Model Scenarios

The following WaterCAD models were created:

1. A model of the existing water distribution system within Tankersley North and South.
2. The proposed water distribution system at buildout assuming empty lots (excluding large farm properties) are ultimately occupied by single family residences.



The Average Day, Max Day, Peak Hour, and Max Day + Fire Flow scenarios were created for each of the models. The water modeling output and exhibits are included in Appendix B.

4.3 Design Criteria and Assumptions

Tankersley North and South are located within the Pressure Zone 2. Section 7.8.1 of the 2015 *Town of Gilbert Public Works and Engineering Standards* summarizes the water system analysis criteria that have been applied for this analysis. In order to classify each land use area as defined by the Maricopa County Assessor into the appropriate Town of Gilbert land use category (Rural Residential, Low Density Residential 1, etc.), the overall area of each land use as identified on Exhibit 1 was divided by the total number of lots in that area. This was then compared to Table 2.5 of the 2012 *Integrated Water Resources Master Plan* by Carollo (see Appendix C) that defines the density (DU/acre) for each land use category. Table 7-13 of the 2015 *Town of Gilbert Public Works and Engineering Standards* was then used to assign demands to each area.

It should be noted that the majority of the northwest corner of Tankersley South is zoned as General Office. However, it appears that there are only single family residential houses in this area. As a conservative measure, the demands calculated for the water model and corresponding Fire Flow were based on the General Office land use. This assumption impacts the line sizing in this area and is discussed further in Sections 4.5 and 5.4.1.

Table 4.3.1 summarizes the demand factors that were applied to the water model:

Table 4.3.1 – DEMAND FACTORS

Demand Scenario	Factor
Maximum Day Demand	1.55 X Average Day Demand
Peak Hour	1.9 X Maximum Day Demand
Fire Flow	1,000 gpm for 2 hours (residential); 3,500 gpm for 4 hours (all other)

In order minimize disruption to existing water customers, it is recommended that pressure drops be limited to 5 psi at fixtures once the new improvements have been installed. Larger water mains will help with this, however, the majority of the head losses that affect customers will be from re-routing service lines. Customers with small diameter service lines and meters may be required to upsize in order to maintain the pressures they are accustomed to experiencing due to increased head loss associated with longer services. GHD will model



individual service line pressures as needed after the proposed alignments are approved by the Town and proposed service routes are chosen by property owners.

4.4 Demand Summary

Table 4.4.1 summarizes the water demand for the Tankersley North and South service area. Detailed calculations are provided in Appendix D.

Table 4.4.1 – WATER DEMAND SUMMARY

Phase	Average Day (gpm)	Max Day (gpm)	Peak Hour (gpm)
Existing – Tankersley North	121	188	356
Existing – Tankersley South	99	153	291
Proposed – Tankersley North	129	200	380
Proposed – Tankersley South	161	250	475

Note that the demands are higher in the Proposed phases as demands for empty lots were calculated and added to the system to account for future growth.

4.5 Distribution System Model Analysis and Results

The results of the modeling aligns with pressure information provided by the Town staff. The modeling shows that the pressures range from 68 psi to 77 psi. The increased waterline sizes do not have much effect on the typical pressures in the system. The following table summarizes the pressure results of the modeling.



Table 4.5.1 – WATER PRESSURE SUMMARY

Phase	Minimum Pressure (psi)	Maximum Pressure (psi)
Existing – Tankersley North	68	75
Existing – Tankersley South	71	77
Proposed – Tankersley North	68	75
Proposed – Tankersley South	70	77

All velocities in the proposed pipes are less than 5 ft/s during the Maximum Day scenario and less than 7 ft/s during the Peak Hour scenario.

The WaterCAD output for the Existing System and Proposed System phases of the Tankersley North and South service areas are located in Appendix B. This output includes system pressures, pipe velocities, demands, and head loss information.

The existing system model shows that the North system failed to meet Max Day + Fire Flow demands at the southeast corner of the site near the commercial development. The South system failed in several locations in the south half likely due to the long dead-end runs present there. Additionally, the area in the northeast corner of the South failed due to the high Fire Flow requirements for that area (see discussion in Section 4.3).

The proposed systems in the North and South eliminate these failures and all nodes pass with all pressures not less than 20 psi. However, a 12" waterline is required to meet the Max Day + Fire Flow requirements in the northeast portion of Tankersley South.



5.0 DESIGN

5.1 Design Criteria

GHD will follow the criteria, standards, and specifications listed below in the design of the Tankersley waterline replacements. Deviations from these criteria are discussed in this report and will be addressed in the project's special provisions.

- Chapters 4 and 5, Title 18 of the *Arizona Administrative Code (AAC)* pertaining to waterline design (R18-4 and R18-5)
- *Maricopa Association of Governments Uniform Standard Specifications and Details for Public Works Construction*, 2017 Revision to the 2015 Edition
- *Town of Gilbert Public Works and Engineering Standards*, 2015
- *Town of Gilbert Supplement to MAG Uniform Standard Specifications for Public Works Construction*, 2015
- *Town of Gilbert Supplement to MAG Uniform Standard Details for Public Works Construction*, September 21, 2015

5.2 Stationing

It is recommended that the stationing throughout the plans be cumulative meaning it increases throughout the plans rather than restarting on each street or intersection. The advantage of this approach is that there are no duplicate stations in the plan set. However, some municipalities prefer to restart stationing with each road or with each intersection to keep station numbers low.

5.3 Right-of-Way & Easement Requirements

A goal of the project is to provide the Town with free and continuous access to all waterlines that serve Tankersley North and South. This is not currently possible as many of the waterlines are located within private property and within fenced yards.

The Town's easement width requirements are detailed in Section 7.8.3.14 of the 2015 *Town of Gilbert Public Works and Engineering Standards*. In general:

- 8 inches and smaller: Minimum 12-foot dedicated easement or as otherwise required by the Town
- 12 inches and smaller: Minimum 15-foot typical dedicated easement or as otherwise required by the Town



Waterline easements or right-of-way dedication shall be through a Map of Dedication or separate instrument. Typically, for water easements not located within a paved roadway or other paved access way, an all-weather access road is required if pipelines, valves, fire hydrants, or other appurtenances requiring Town access are located within the easement. However, this may not always possible in areas where easements are required on private lots.

GHD's proposed layout relocates the waterlines to existing right-of-way wherever possible. It should be noted that some of the right-of-way, especially in the North, is Maricopa County Right-of-Way. In these cases, additional coordination will be required with the County to install the new waterlines within the County's right-of-way. The Town will likely be required to obtain permits from the Maricopa County Department of Transportation (MCDOT) for all waterlines installed within MCDOT right-of-way. The costs associated with this permit are typically 3% of the construction cost plus a minimal review and processing fee. This fee is included in the cost estimates discussed in Section 7.

If existing right-of-way is not immediately accessible, the waterlines will be located within existing roadways within existing private easements or agreements. Finally, if right-of-way or existing easements or agreements are not in place, new easements within private property may be required.

Although several private streets are present within Tankersley North and South, a cursory review of deeds within the area suggests that these streets may not lie within an existing roadway easement or that a private utility easement (PUE) is not available within the street. With this in mind, approximately 52 properties in the North and 108 properties in the South will require additional easement research. Since this area is entirely within a Maricopa County island, plat maps are not readily available on the Maricopa County Assessor's website. The parcel deeds are available, however, they are not required to include identification of easements. Even if some easements are identified, there may be another instrument filed with the County that modified or extinguished that easement at a later date. The only accurate and complete method to identify parcels with easements encumbered on them is to procure a title report for each parcel. These parcels are identified on Exhibits 2 and 3 and within Appendix E.

Although most of the proposed waterlines will be within existing streets, in order to achieve the desired looping within the system, new waterlines will pass through private property outside of existing streets at some locations. A summary of these locations and lengths of the proposed easements is found below. Additionally, the properties that may require new private easements or agreements on their property are designated on Exhibit 2 and 3.

Tankersley North

1N: This possible easement is near the southeast corner of the site and would connect the proposed waterlines within East Geronimo Court (East Fairview Lane) and East Kessler Lane. There is currently an existing 6" waterline within this proposed location. There is an apparent ingress, egress, and utility easement on APN 304-80-982 but the exact location is unknown and additional research should be performed.. Access is currently limited in this area by existing fencing. The length of this easement outside of the existing street would be approximately 280'.



1S: This easement is required near the central western edge of Tankersley South. It would connect the proposed waterlines in South 157th Street, South 158th and South 156th Street. If an adjacent lot owner is not willing or unable to provide access within their property, a portion of this easement may have to be within the existing Roosevelt Water Company District property and run parallel to the existing canal. Regardless of the parallel alignment, the RWCD property

may have to be crossed perpendicularly to link the two lines. The length of this easement outside of the existing street would be approximately 1,000'.

2S: This easement is required in the central section of Tankersley South. It would connect the proposed waterlines in South 157th Way, South 158th Street, and South 159th Street along the RWCD canal. Again, if adjacent lot owners are not willing or unable to provide access through their property, an easement would be required within the RWCD property. There is an existing dirt driveway linking South 159th Street to South Greenfield Road that appears to be on both private property and RWCD property. An existing waterline is installed within this driveway but its exact horizontal location is unknown. The length of this easement outside of the existing street would be approximately 1,250'



3S: This easement is required along the central western edge of Tankersley South to connect the proposed waterlines in South 156th Street and East Maplewood Street. The proposed



easement could potentially run along the western edge of an unoccupied lot (APN 304-53-205A). This lot has an existing chain link fence along its southern border a portion of its western border. It has apparent ingress, egress, and utility easements but their exact location is unknown. The length of this easement outside of the existing street would be approximately 420'.





4S: This easement is required near the southwest corner of the site within the East Melrose Street alignment and would link the proposed waterlines within East Melrose Street and South 156th Street (South Coronado Road). The length of this easement outside of the existing street would be approximately 110'.



5S: This possible easement is located near the southwest corner of the site and would link the proposed waterline within East Claxton Avenue to the existing 16" waterline within East Germann Road. An existing waterline is currently installed within the alignment of this easement, however, access to this line is obviously limited by the existing improvements on these lots. These improvements include concrete driveways, several large trees, and CMU block walls. If an easement does not currently exist, installation of the waterline would be



expensive and replacing the existing improvements in kind would still limit the Town's access to the waterline. The length of this easement outside of the existing street would be approximately 350'.



5.4 Waterline

5.4.1 Sizing and Materials

Based on the Town's requirements and the results of the water modeling, the majority of the proposed waterlines will be 8" in diameter. However, based on the conservative assumptions discussed in Section 4.3, 12" waterlines are required within South 157th Place between East Pecos Road and East Bonanza Road in order to satisfy the Max Day + Fire Flow requirements of the more demanding zoning in that area. However, if the Town would prefer to allow a lower Fire Flow requirement for this area or to recognize



this area as only Single Family Residential rather than General Office, these lines could be downsized to 8".

Per conversations with Town of Gilbert staff, all new mains shall be polyvinyl chloride (PVC) conforming to the requirements of AWWA C900 and shall be a minimum pressure class 235 psi (DR 18) (FM approved for 150 psi). Vertical realignments required will be constructed with ductile iron pipe (DIP).

5.4.2 Horizontal Alignment

Exhibits 2 and 3 illustrate the proposed alignments in the North and South. In order to satisfy the Town's desire to achieve as much looping as possible, some water mains will require new easements. However, in some cases, dead-end lines will still be present due to obvious physical obstructions (e.g. block walls or buildings between waterlines) or the complexity of the looping required.

If the acquisition of these easements becomes too costly or difficult to obtain, the water modeling can be updated to verify if all of the loops are required in order to achieve the desired fire flow for each area. In some cases if the fire flow is achieved and the loop is removed, however, the customers may experience water quality issues on the dead-end lines. In this case, the Town may wish to periodically exercise a hydrant near the end of the dead-end to flush the lines. Dead-ends are discussed further in Section 5.4.9.

Tankersley North

Due to the access and looping concerns discussed earlier, many water mains will be relocated in the North. The only evident existing right-of-way is within East Fairview Street and South 164th Street (Constellation Way) and new waterlines are proposed within these streets. The remaining waterlines are proposed within apparent existing easements currently used for other utilities and/or internal streets or within new easements as shown on Exhibit 2.

The dead-ends that would be difficult to eliminate are summarized below.

- Private Road (Connecting to South Greenfield Road between East Frye Road and East Elgin Street): New 8" waterline tying into the existing 16" line in South Greenfield Road. Approximately 485' of dead-end line within easement.



- Private Road (Between Greenfield Road and South 163rd Street Connecting to East Fairview Street and Running North): New 8" waterline tying into new 8" line in East Fairview Street. Approximately 500' of dead-end line within easement.

Tankersley South

The alignments of the proposed waterlines within the South generally follow those of the existing waterlines. Right-of-way is available along many of the alignments, however several apparent existing easements will also be utilized. In order to eliminate the long dead-end runs prevalent throughout the South, additional looping is proposed in several areas that will require new easements.

Tankersley South includes property owned by the Roosevelt Water Conservation District (see Exhibit 3). This property includes a channel that provides irrigation water to the surrounding area. In order to loop the system, a new waterline is proposed adjacent to and within this property. A new crossing is also proposed on the west end of the South area.

Similar to the North, a handful of dead-ends will remain in the South as crossing private lots with new easements may not be feasible due to existing structures or access limitations. These dead-ends are summarized below.

- South 159th Street (North Half): New 8" waterline tying into the new 8" line within East Bonanza Road. Approximately 480' dead-end line within easement.
- South 159th Street (South Half): New 8" waterline tying into the new 8" line within easement adjacent to RWCD property. Approximately 575' dead-end line within easement.

5.4.3 Horizontal Deflections

The majority of the proposed waterlines are linear. Any horizontal deflections required due to easement or roadway alignment fluctuations can be accommodated through pipe joint deflections smaller than 2.5 degrees which is 50% of the maximum deflection typically recommended by piping manufacturers.

5.4.4 Vertical Alignment

The minimum slope for all waterlines will be 0.002 ft/ft. Zero slopes in the waterlines will not be allowed.



Since East Fairview Street connects South Greenfield Road with South Higley Road, it can be classified as a collector street according to the definition provided in Chapter 3 of the 2012 *Town of Gilbert General Plan*. Per the 2015 *Town of Gilbert Public Works and Engineering Standards*, all waterlines installed within collector streets shall have a minimum cover of 48" over the top of the pipe.

All waterlines less than 12 inches in diameter installed within the remaining existing streets not classified as collector streets shall have a minimum cover of 36 inches over the top of the pipe.

All waterlines installed through undeveloped property shall have a minimum cover of 60 inches over the top of the pipe from the existing grades. This requirement applies to proposed waterlines within new easements outside of existing streets.

Finally, all waterlines that are 12 inches in diameter shall have a minimum cover of 48 inches.

The waterline may be required to be vertically realigned to avoid existing utilities or irrigation canals. The alignment will be finalized during the design phase once the potholing has been performed. All vertical realignments shall be done with DIP.

Air release valves or fire hydrants (at the Town's discretion) will be installed at high points where air entrapment may occur.

5.4.5 Connections

The proposed lines will tie into the existing system in several locations. It is the Town's preference that connections be made by cutting a new tee into the existing water mains if the main can be shut down with no service disruption. Otherwise, tapping sleeves and valves will be installed by a Town approved contractor per MAG Standard Detail 340. Tapping sleeves and valves are not allowed for connections of same size pipes. In these cases, a new tee must be installed and cut into the existing pipe.

Table 5.4.5.1 summarizes the connection locations for Tankersley North.

Table 5.4.5.1 – NORTH WATER CONNECTIONS

Dia. (in.)	Location
8 x 8	S 164th Street (Constellation Way) & E Frye Road



Dia. (in.)	Location
12 x 8	E Elgin Road & S Higley Road
12 x 8	E Fairview Lane & S Higley Road
8 x 8	E extension of E Kessler Lane to commercial development at the northwest corner of E Pecos Road & S Higley Road.
16 x 8	S 166 th Street & E Pecos Road
16 x 8	S 164 th Street (Constellation Way) & E Pecos Road
16 x 8	EFairview Road & S Greenfield Road
16 x 8	Private Road between E Frye Road & E Elgin Street & S Greenfield Road

It should be noted that the existing 12" waterline within South Higley Road is ACP, and, according to Town staff, it was installed in 1980. The typical useful life of ACP pipe is 50 years. The Town may want to consider replacing this waterline between Frye Road and E Pecos Road as part of this project. Since complete removal and disposal of ACP pipe can be hazardous and expensive, it is recommended that the existing pipe be abandoned in place and filled with grout. A cost estimate for this work has been included in Section 7 and the Appendix.

Table 5.4.5.2 summarizes the connection locations for Tankersley South.

Table 5.4.5.2 – SOUTH WATER CONNECTIONS

Dia. (in.)	Location
16 x 8	East Bonanza Road & South Greenfield Road
16 x 8	Private Road along the RWCD property between E Bonanza Road and E Willis Road & S Greenfield Road
16 x 8	E Willis Road & S Greenfield Road
16 x 8	E Maplewood Street & S Greenfield Road
16 x 8	E Melrose Street & S Greenfield Road
16 x 8	E Claxton Avenue & S Greenfield Road
16 x 8	Easement connecting East Claxton Avenue and S Germann Road



Dia. (in.)	Location
12 x 8	Easement extending the E Melrose Street alignment & N 156th Street
8"	E Bonanza Road (tie into existing 8" line near the west end of the road).
16 x 12	S 157th Street (or from adjacent commercial property) & E Pecos Road.

5.4.6 Valves

Per the 2015 *Town of Gilbert Public Works and Engineering Standards*, all valves will be resilient seat gate valves mounted vertically. Valves will be installed a maximum of 600 feet apart in commercial areas and a maximum of 800 feet apart in residential areas. Valves shall be located so that a maximum of 30 single family dwelling units, a maximum of two fire hydrants, or a maximum of four valves are involved in a waterline shutdown.

5.4.7 Fire Hydrants

The 2015 Town of Gilbert Public Works and Engineering Standards describe the fire hydrant design and spacing requirements in Sections 7.8.4.8 and 7.8.4.9. New “dry-barrel” type hydrants complying with the International Fire Code and Town Amendments will be installed within the rights-of-way or in waterline easements.

Spacing will vary depending on the hydrant’s location. The hydrants in Tankersley South will generally be set near the existing hydrants. However, in general, hydrants serving Single Family Residences will have a maximum spacing of 500 feet. Hydrants in cul-de-sacs will have a maximum spacing of 250 feet. Hydrants in business and commercial locations will have a maximum spacing of 300 feet.

Hydrants may also be installed at high points in the system (at the Town’s discretion) and at the end of dead-end lines.

5.4.8 Service Lines, Meters, and Meter Boxes

Since the many of the waterlines are being relocated in the North, the majority of the meters and services must also be relocated. However, as with the existing system, not all lots will be located adjacent to a new waterline. Many lots will require installation of private services through an easement on an adjacent property. The lots on which a new



or existing easement will be required to serve an adjacent property are been identified on Exhibits 2 and 3. A table identifying these lots is provided in Appendix F.

Some lots can be served through more than one adjacent property, but if a driveway currently exists between the lot requiring the service and another lot, it was assumed the service could be installed within that driveway. Additionally, if a lot requires a water service through an adjacent lot but both lots share the same owner, according the Maricopa County Assessor, it is assumed that a new easement or agreement would not be required and these lots were not identified on the exhibits.

A large source of headloss to each customer is through the service line and meter. The majority of the properties in the Tankersley area (especially Tankersley North) are set back far from the street. This creates long service runs and if the services are undersized, the customer can experience considerably lower pressures than would be expected otherwise. With this in mind, many of the existing services may need to be upsized in order to accommodate the longer service runs that many of the customers will require. In the same respect, some of the service sizes may be able to be downsized for the lots with shorter service runs in the proposed system.

It is anticipated that each customer will keep the same meter size that they currently have. Meters will be installed within the right-of-way or a PUE. In instances where a private service is required to pass through an adjacent homeowner's lot, both meters will be installed within the right-of-way or a PUE.

The minimum public service size will be 1". However, as part of the final design, GHD will coordinate with each individual homeowner to choose a new private service line alignment for their property. GHD will model this final alignment and confirm that the new service does not create a headloss greater than 5 psi at the point of connection to the house or business. If the 1" service size creates too great of a headloss, the size of the service (and meter if required by the Engineering Standards) will be incrementally increased until the desired pressure is achieved. It is anticipated that most public and private services will be 2" or less.

A handful of lots along East Pecos Road will require new connections to the existing 16" waterline within the street. Along South Greenfield Road, some lots will require a connection to either the existing 16" waterline or the existing 6" waterline within the street. Finally, a majority of the lots along East Frye Road will require connections to the existing 8" waterline in the street.

Section 7.8.4.6 of the 2015 *Town of Gilbert Public Works and Engineering Standards* outlines the requirements for new water services.

5.4.9 Dead-Ends

Water quality can be a concern on long dead-end waterlines. However, the Town has not reported any water quality issues within the Tankersley North or South service areas. An effort has been made in the proposed water system to limit dead-end runs as much as possible. Per Section 7.8.3.11 of the 2015 Town of Gilbert Public Works and Engineering Standards, all dead-end lines must be approved by the Public Works Department, must be equipped with a flushing pipe assembly installed out of traffic per MAG Standard Detail 390, Type A, and no more than 25 water services can connect to the waterline. A gate valve will be installed on each dead-end between the last service and the flushing assembly. Dead-ends are further discussed in Section 5.4.2.



6.0 CONSTRUCTION SEQUENCING

6.1 Overall Sequencing and Phasing

The sequencing for this project will be kept as simple as possible. The basic steps are proposed as follows.

1. Install all connections in the adjacent collectors and arterials (South Higley Road, South Greenfield Road, East Frye Road, East Pecos Road, and East Germann Road) and stub out to the existing streets.
2. Install new waterline along one street or easement.
3. Pressure test the new waterline.
4. Install new services up to the meter.
5. Flush the new line and perform Bac-T test.



6. Replace existing pavement or ground cover.
7. Move on the next street or easement.
8. When the service contractor is ready, they can install the private services from the meter to the house or building connection.
9. Once the new house connections have been made, the existing waterline and its branches will be drained, filled with grout, capped, and abandoned.

6.1.1 Minimizing Disruptions

The project's waterlines will be installed to limit pipeline work to one street at a time. This will reduce the traffic impacts to a single road and the driveways along it. In addition, this will reduce the number of water customers that would be impacted should a water break occur during construction. The project phasing also requires that the existing waterlines within a given street remain in service until the proposed parallel waterline and associated services are installed, tested, and in service. This will limit the impact to individual water customers to the following two occurrences:

- When the contractor connects their new service to their house or building
- When the contractor makes phased connections

The plans and special provisions will assign responsibilities to the contractor to limit traffic and water service disruptions. With respect to traffic impacts, these responsibilities include restricting when work can be performed, how many lanes must be kept open, and continuous access to all driveways. To minimize water service impacts, the special provisions will limit how long waterlines and water service lines can be out of service and the equipment the contractor must have on site during shut downs and connections. The special provisions will also require the contractor to prepare a waterline break response plan and make repairs to the existing waterline should a break occur.

Finally, the special provisions will limit the risk of waterline breaks through required mandatory coordination. The contractor will be required to coordinate all shut downs with the Town of Gilbert 10 days in advance. The contractor must then coordinate with the Town daily to verify the project is on schedule or if adjustments are needed. Based on this coordination, the Town will determine which valves should be closed and the operational practices needed to reduce the flow and pressure in the existing waterline



6.1.2 Schedule

Once the new easement agreements are finalized and assuming both the North and the South projects move forward concurrently, we would expect homeowner coordination to take four months, design to take an additional five to six months for final approval, and construction to take 12 - 14 months. The total project duration would be approximately 21 - 24 months.

7.0 PRELIMINARY ESTIMATE OF COST

Table 7.0.1 summarizes the preliminary estimate of cost for Tankersley North.

Table 7.0.1 – TANKERSLEY NORTH PRELIMINARY COST ESTIMATE

Item	Cost
Lot Research & Easement Acquisition	\$159,309
Construction	\$3,463,030
Total	\$3,622,339

Table 7.0.2 summarizes the preliminary estimate of cost for the replacement of the existing ACP waterline within South Higley Road between Frye Road and East Pecos Road.

Table 7.0.2 – ACP REPLACEMENT PRELIMINARY COST ESTIMATE

Item	Cost
Total	\$1,508,060



Table 7.0.3 summarizes the preliminary estimate of cost for Tankersley South.

Table 7.0.3 – TANKERSLEY SOUTH PRELIMINARY COST ESTIMATE

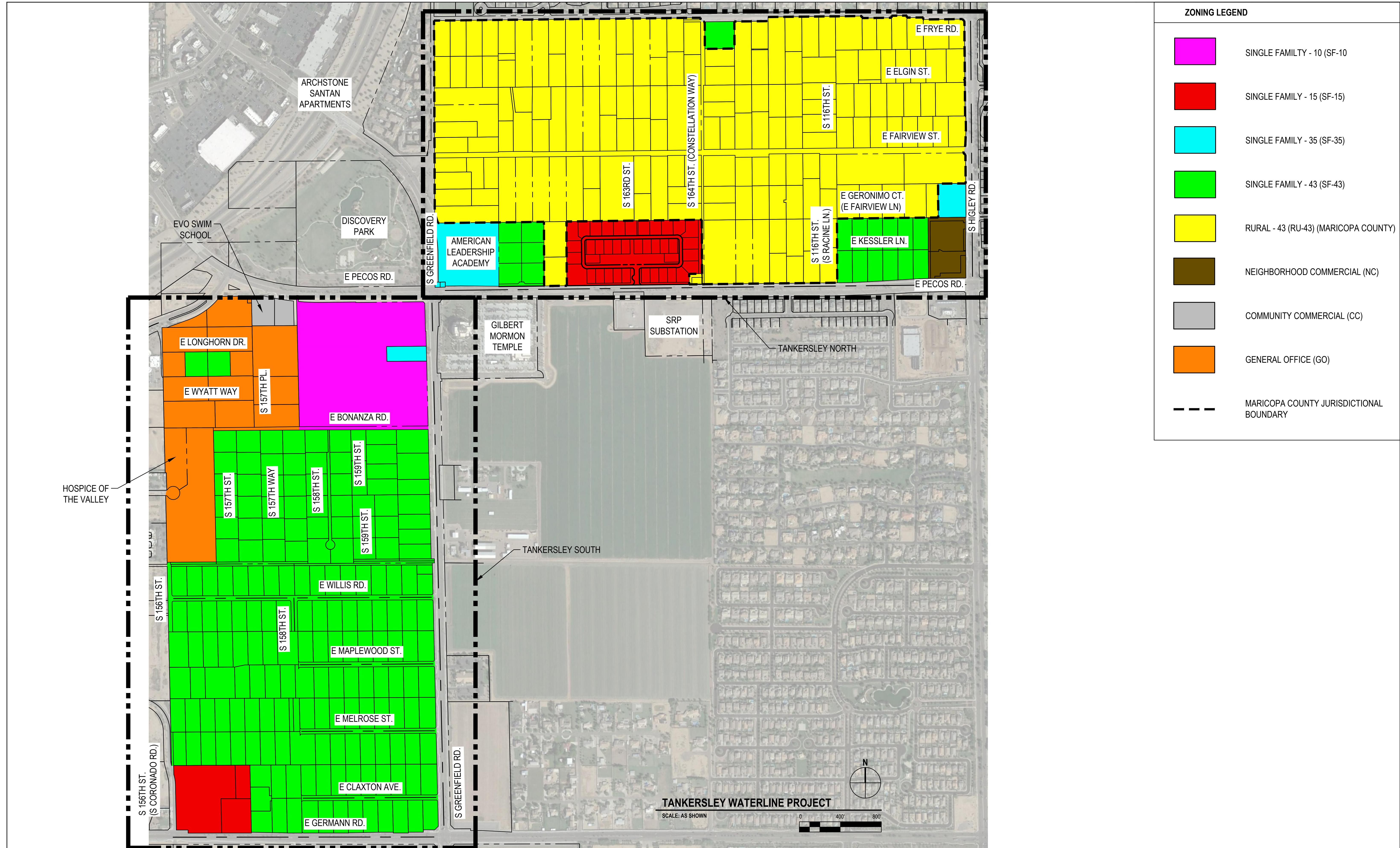
Item	Cost
Lot Research & Easement Acquisition	\$447,452
Construction	\$5,000,921
Total	\$5,448,373

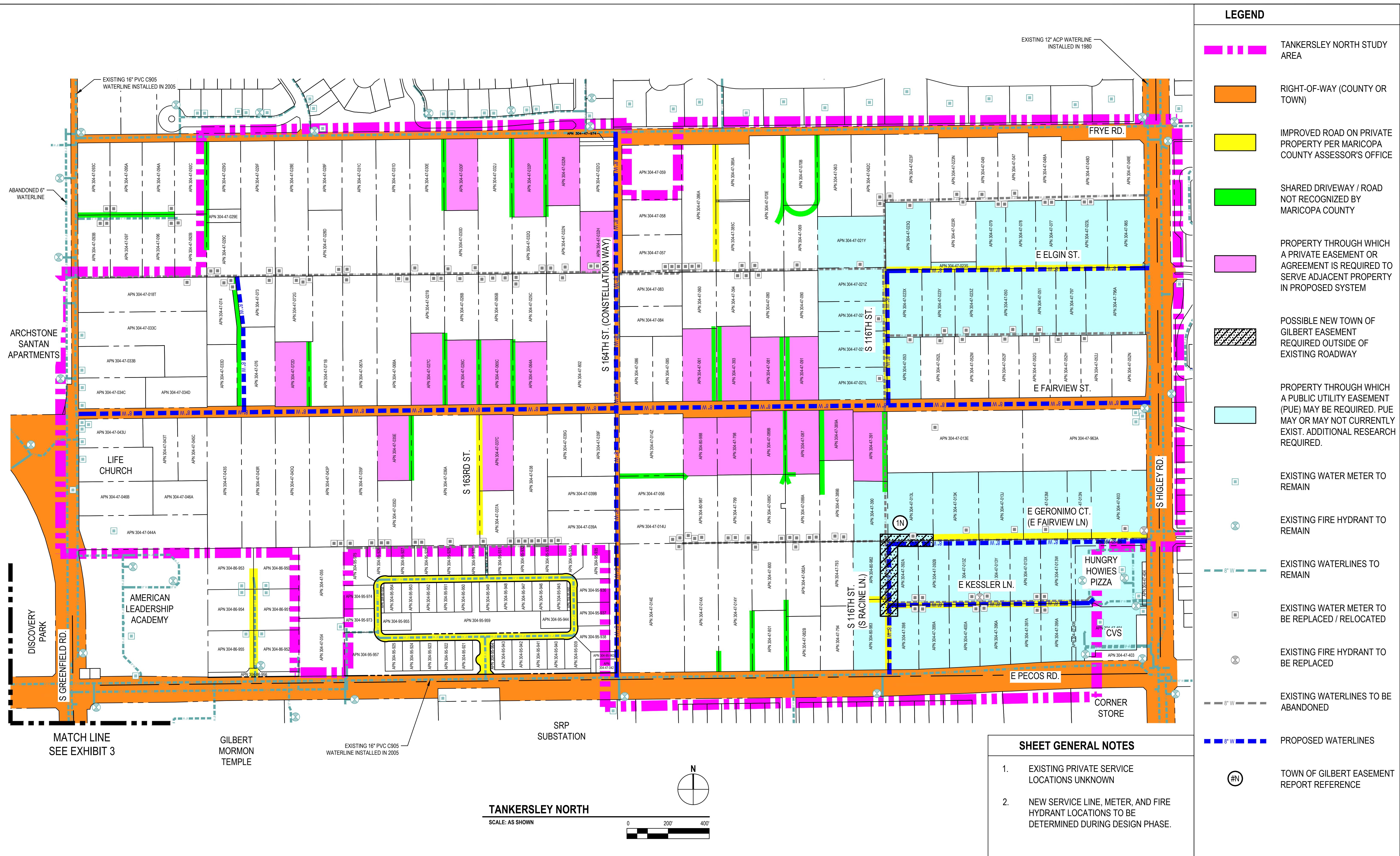
The costs above include permit fees, design fees, and a 20% contingency for construction. A detailed breakdown of the estimates is provided in Appendix G.

The total estimated cost for Tankersley North and the ACP replacement is \$5,130,399.

The total combined estimated cost for Tankersley North and Tankersley South is \$9,070,712.

The total estimated cost for Tankersley North and Tankersley South with the ACP replacement is \$10,878,772.





No.	Issue	Drawn	Approved	Date

**EXISTING 16" PV
WATERLINE INSTALLED**

TANKERSLEY NORTH

SCALE: AS SHOWN

0 200' 400' 600' 800' 1000' 1200' 1400' 1600' 1800' 2000'



200' 40



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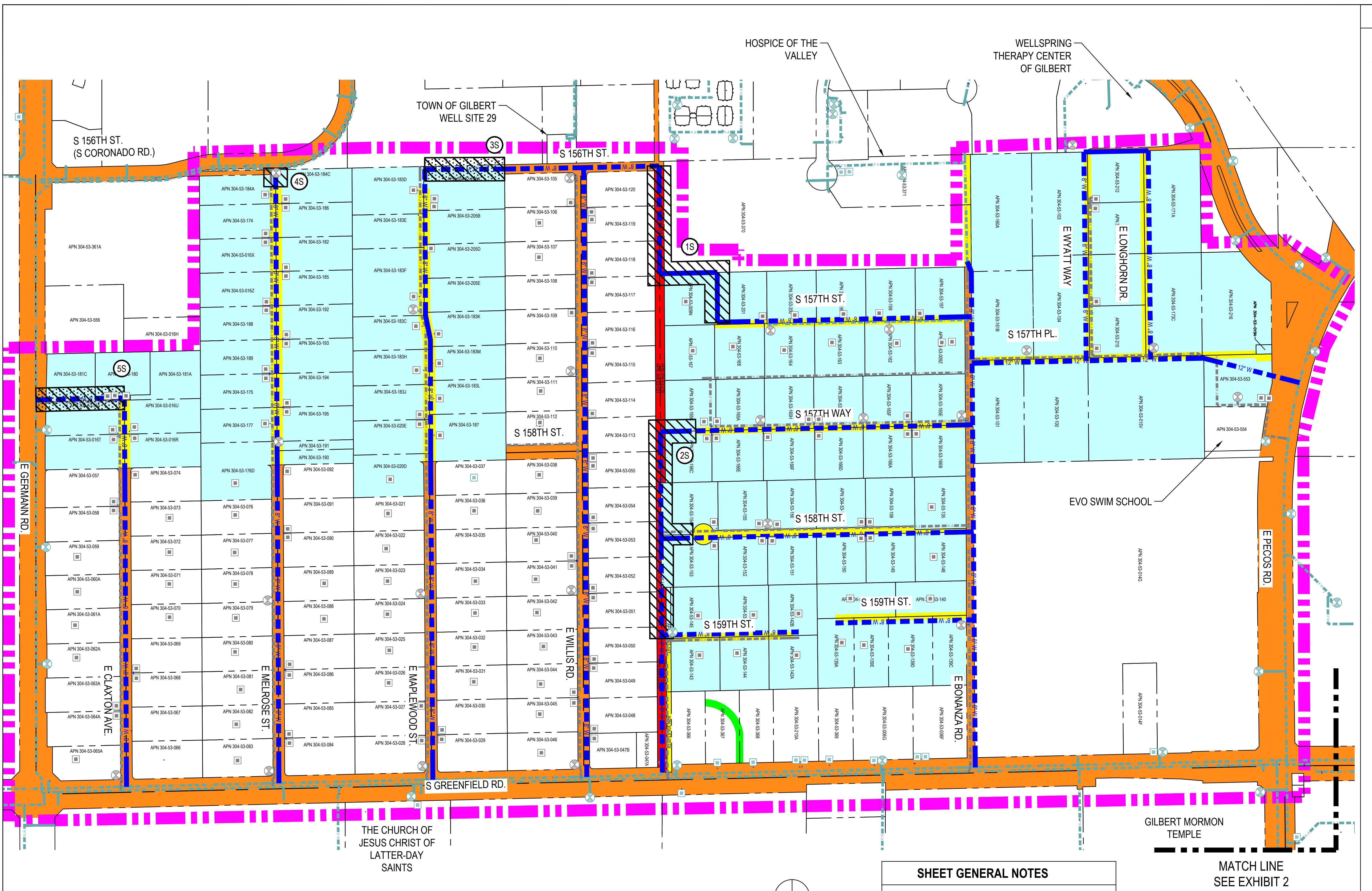
Drawn	A. FOSCATO	Designer	Z. POPE	Client Project Title Project No.	TOWN OF GILBERT WATERLINE TRANKERSLEY REPLACEMENT TANKERSLEY NORTH EXISTING AND PROPOSED WATER SYSTEM
Drafting Check	Z. POPE	Design Check	M. WORLTON		
Project Manager	M. WORLTON	Date	AUGUST 2017		11136654
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					Sheet 2 of 4

PE	Client	TOWN OF GILBERT
	Project	WATERLINE TRANKERSLEY REPLACEMENT
ORTON	Title	TANKERSLEY NORTH
UST 2017		EXISTING AND PROPOSED WATER SYSTEM
	Project No.	11136654

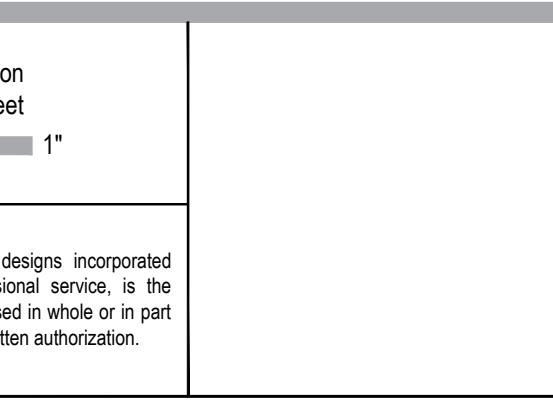
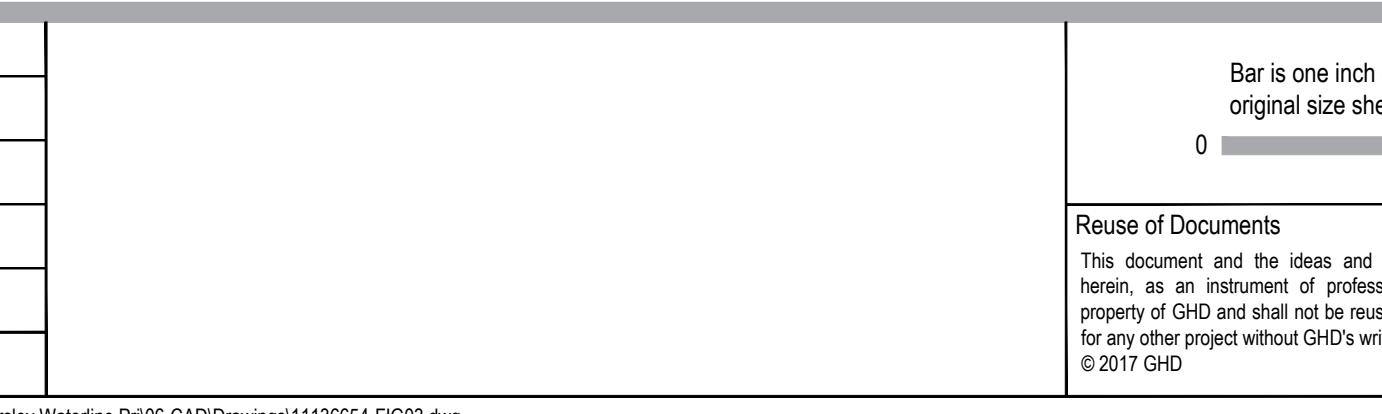
Sheet **2** of **4**

LEGEND

- TANKERSLEY NORTH STUDY AREA
- RIGHT-OF-WAY (COUNTY OR TOWN)
- IMPROVED ROAD ON PRIVATE PROPERTY PER MARICOPA COUNTY ASSESSOR'S OFFICE
- SHARED DRIVEWAY / ROAD NOT RECOGNIZED BY MARICOPA COUNTY
- PROPERTY THROUGH WHICH A PRIVATE EASEMENT OR AGREEMENT IS REQUIRED TO SERVE ADJACENT PROPERTY IN PROPOSED SYSTEM
- ROOSEVELT WATER CONSERVATION DISTRICT (RWCD) PROPERTY
- NEW TOWN OF GILBERT WATER MAIN EASEMENT
- POSSIBLE NEW TOWN OF GILBERT EASEMENT REQUIRED OUTSIDE OF EXISTING ROADWAY
- PROPERTY THROUGH WHICH A PUBLIC UTILITY EASEMENT (PUE) MAY BE REQUIRED. PUE MAY OR MAY NOT CURRENTLY EXIST. ADDITIONAL RESEARCH REQUIRED.
- EXISTING WATER METER TO REMAIN
- EXISTING FIRE HYDRANT TO REMAIN
- EXISTING WATERLINES TO REMAIN
- EXISTING WATER METER TO BE REPLACED / RELOCATED
- EXISTING FIRE HYDRANT TO BE REPLACED
- EXISTING WATERLINES TO BE ABANDONED
- PROPOSED WATERLINES
- TOWN OF GILBERT EASEMENT REPORT REFERENCE



No.	Issue	Drawn	Approved	Date



Drawn A. FOSCATO	Designer Z. POPE
Drafting Check Z. POPE	Design Check M. WORLTON
Project Manager M. WORLTON	Date AUGUST 2017
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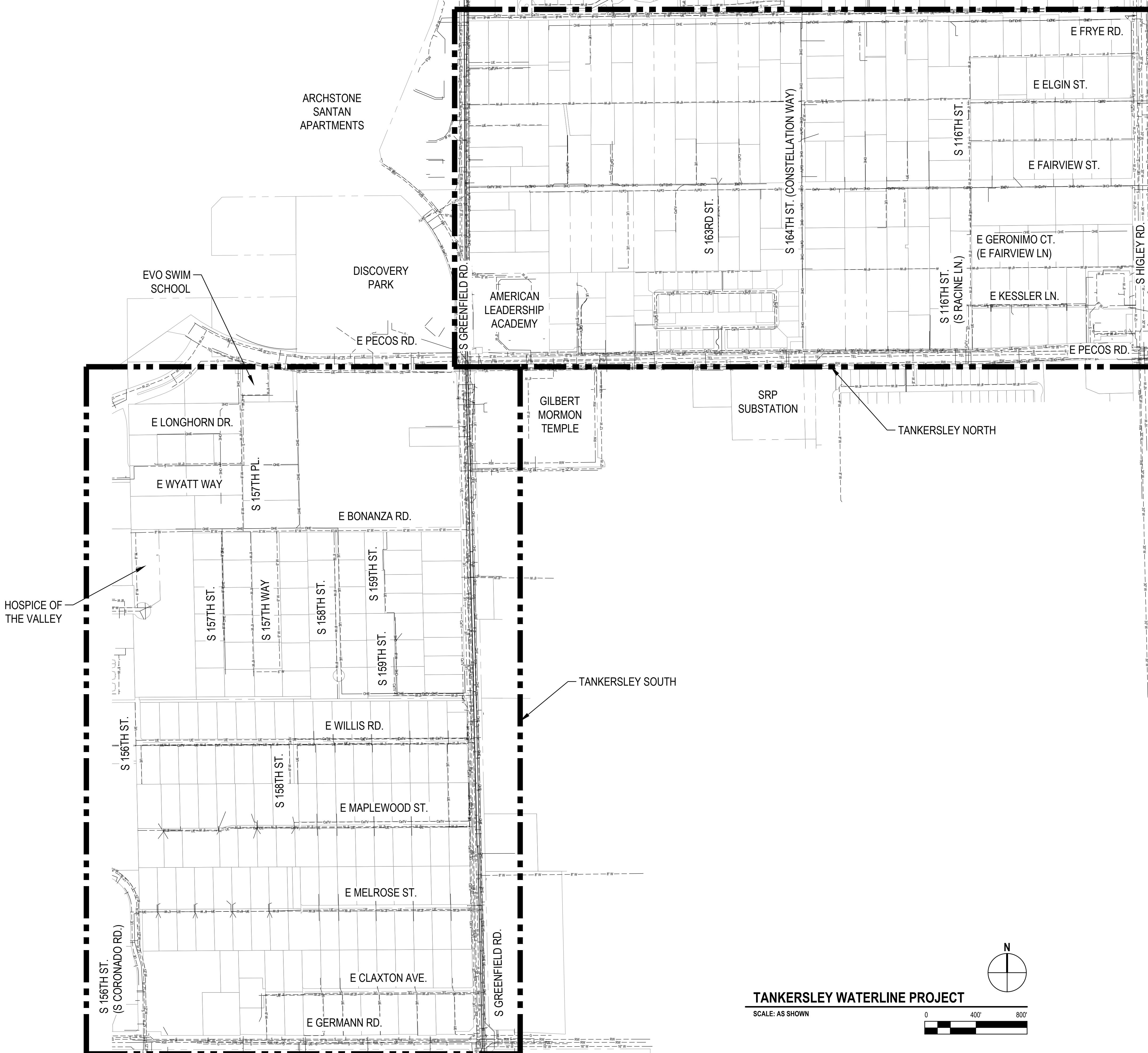
TOWN OF GILBERT
WATERLINE TANKERSLEY REPLACEMENT
TANKERSLEY SOUTH
EXISTING AND PROPOSED WATER SYSTEM
Project No. 11136654

EXHIBIT 3

Sheet 3 of 4

UTILITY LEGEND

W	EXISTING WATERLINES
RW	EXISTING RECLAIMED WATER LINES
S	EXISTING SEWER LINES
SD	EXISTING STORM DRAIN LINES
G	EXISTING GAS LINES
UE	EXISTING UNDERGROUND ELEC LINES
OHE	EXISTING OVERHEAD ELEC LINES
CATV	EXISTING CATV LINES
TEL	EXISTING TELEPHONE LINES



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Drawn A. FOSCATO Designer Z. POPE
Drafting Check Z. POPE Design Check M. WORLTON
Project Manager M. WORLTON Date AUGUST 2017

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Client TOWN OF GILBERT
Project WATERLINE TANKERSLEY REPLACEMENT
Title TANKERSLY UTILITIES (NORTH AND SOUTH)
Project No. 11136654



APPENDIX A

Fire Hydrant Test Results

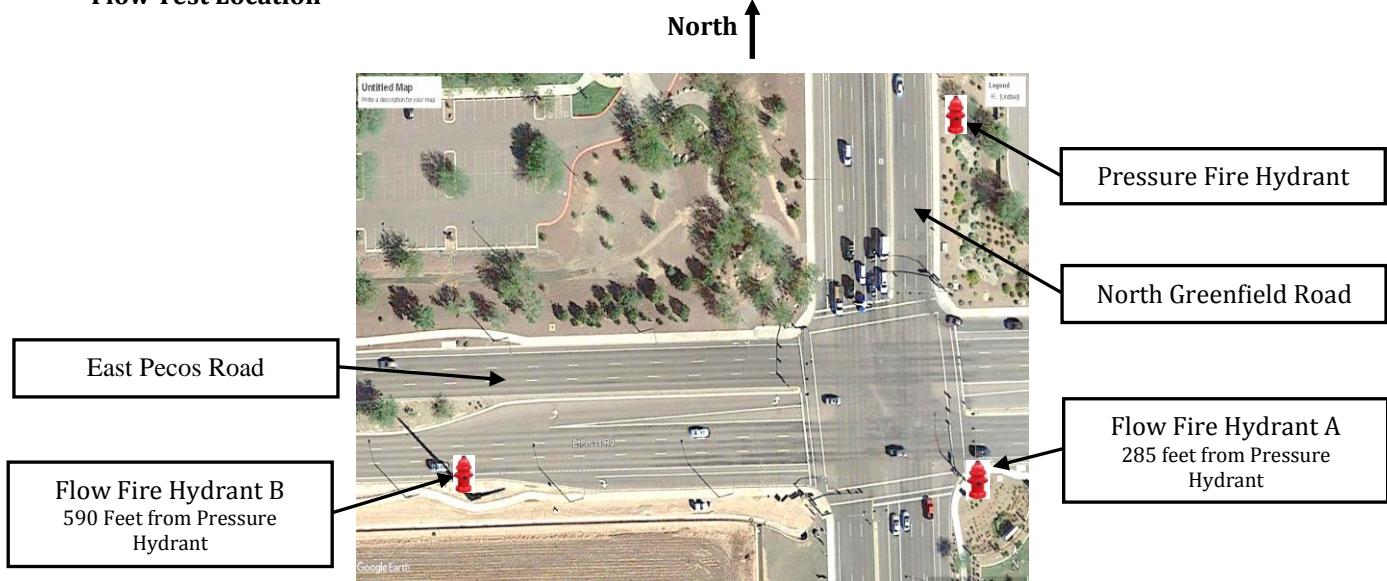
Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT 1

Project Name: Gilbert Water Mains
 Project Address: Greenfield Road & Pecos Road, Gilbert, Arizona 85297
 Client Project No: Not provided
 Arizona Flow Testing Project No.: 17125
 Date and time flow test conducted: June 8, 2017 at 9:30 AM
 Data is current and reliable until: December 8, 2017
 Conducted by: Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
 Witnessed by: Susan Logan–Town of Gilbert Water Dept. (480-266-6972)

<u>Raw Test Data</u>	<u>Data with 10 % Safety Factor</u>
Static Pressure: 74.0 PSI (Measured in pounds per square inch)	Static Pressure: 66.6 PSI (Measured in pounds per square inch)
Residual Pressure: 62.0 PSI (Measured in pounds per square inch)	Residual Pressure: 54.6 PSI (Measured in pounds per square inch)
Pitot Pressure: Hyd A 25.0 PSI (4 inch and 2 ½ inch) Hyd B 25.0 PSI (4 inch) 23.0 (2 ½ inch)	Distance between hydrants: See Below
Diffuser Orifice Diameter: Hyd A One (2 ½ inch) (Measured in inches) Hyd A One (4 inch) Hyd B One (2 ½ inch) Hyd B One (4 inch)	Main size: Not Provided
Coefficient of Diffuser: .90	
Flowing GPM: 5,940 GPM (Measured in gallons per minute) 839 GPM+2,148 GPM+805 GPM+2,148 GPM=5,940 GPM	Flowing GPM: 5,940 GPM
GPM @ 20 PSI: 13,381 GPM	GPM @ 20 PSI: 12,357 GPM

Flow Test Location



Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT 2

Project Name: Gilbert Water Mains
Project Address: Frye Road & Higley Road, Gilbert, Arizona 85297
Client Project No: Not provided
Arizona Flow Testing Project No.: 17125
Date and Time flow test conducted: June 8, 2017 at 10:00 AM
Data is current and reliable until: December 8, 2017
Conducted by: Floyd Vaughan - Arizona Flow Testing, LLC (480-250-8154)
Witnessed by: Susan Logan - City of Gilbert Water (480-266-6972)

Raw Test Data

Static Pressure: **70.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **59.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **25.0 PSI Each**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One (4-inch)
(Measured in inches) One (2-½ inch)

Coefficient of Diffuser: 0.9

Flowing GPM: **2,987 GPM**
(Measured in gallons per minute)
 $2,148 \text{ GPM} + 839 \text{ GPM} = 2,987 \text{ GPM}$

GPM @ 20 PSI: **6,766 GPM**

Data with 10 % Safety Factor

Static Pressure: **63.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **52.0 PSI**
(Measured in pounds per square inch)

Distance between hydrants: Approx. 380 Feet

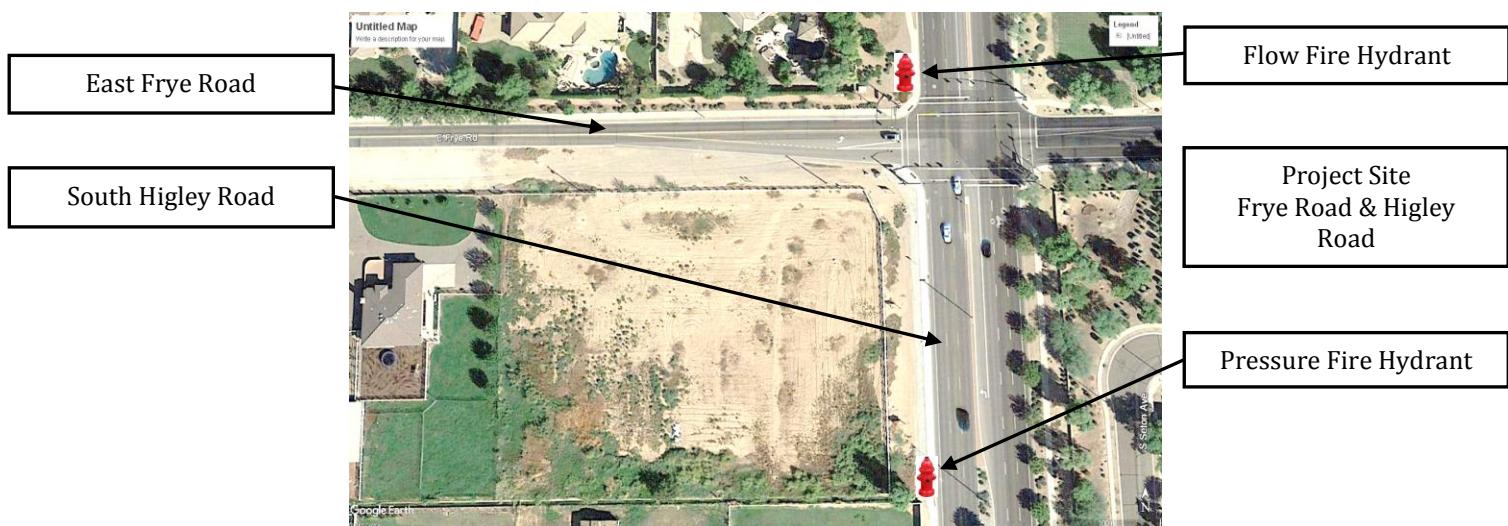
Main size: Not Provided

Flowing GPM: **2,987 GPM**

GPM @ 20 PSI: **6,237 GPM**

Flow Test Location

↑ North



Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT 3

Project Name: Gilbert Water Mains
Project Address: Germann Road & 156th Street, Gilbert, Arizona 85297
Client Project No: Not provided
Arizona Flow Testing Project No.: 17125
Date and Time flow test conducted: June 8, 2017 at 10:30 AM
Data is current and reliable until: December 8, 2017
Conducted by: Floyd Vaughan - Arizona Flow Testing, LLC (480-250-8154)
Witnessed by: Susan Logan - City of Gilbert Water (480-266-6972)

Raw Test Data

Static Pressure: **74.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **66.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **35.0 PSI Each**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One (4-inch)
(Measured in inches) One (2-½ inch)

Coefficient of Diffuser: 0.9

Flowing GPM: **3,535 GPM**
(Measured in gallons per minute)
 $2,542 \text{ GPM} + 993 \text{ GPM} = 3,535 \text{ GPM}$

GPM @ 20 PSI: **9,913 GPM**

Data with 10 % Safety Factor

Static Pressure: **66.6 PSI**
(Measured in pounds per square inch)

Residual Pressure: **58.6 PSI**
(Measured in pounds per square inch)

Distance between hydrants: Approx. 400 Feet

Main size: Not Provided

Flowing GPM: **3,535 GPM**

GPM @ 20 PSI: **9,155 GPM**

Flow Test Location

↑ North





APPENDIX B

WaterCAD Water System Modeling Results

LEGEND

PIPE DIAMETER (INCH)

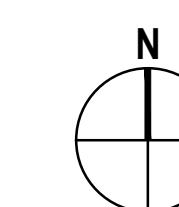


No.	Issue	Drawn	Approved	Date

TANKERSLEY NORTH

SCALE: AS SHOWN

0 200' 400'



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Project WATERLINE TANKERSLEY REPLACEMENT
Title TANKERSLEY NORTH
Existing Water System
Project No. 11136654

Original Size Arch D Sheet No. WATERCAD EXHIBIT

Sheet 1 of 4

LEGEND

PIPE DIAMETER (INCH)
≤ 4.0
≤ 6.0
≤ 8.0
≤ 12.0
≤ 16.0
≤ 30.0



TANKERSLEY SOUTH

SCALE: AS SHOWN



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0 1"

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Project Manager M. WORLTON Date AUGUST 2017
Client Project TOWN OF GILBERT
Title WATERLINE TRUNKERSLEY REPLACEMENT
Waterline Trunkersley South Existing Water System
Project No. 11136654
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Sheet 2 of 4

No.	Issue	Drawn	Approved	Date



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,286.21	0.0	1,458.03	74
J-2	1,286.20	0.0	1,458.03	74
J-3	1,286.21	0.0	1,458.03	74
J-4	1,287.47	0.0	1,458.03	74
J-5	1,287.47	4.0	1,458.03	74
J-6	1,287.63	0.0	1,458.03	74
J-7	1,287.63	0.0	1,458.03	74
J-10	1,282.55	0.0	1,457.97	76
J-11	1,282.55	0.0	1,457.97	76
J-12	1,282.56	0.0	1,457.97	76
J-13	1,295.30	1.0	1,458.03	70
J-14	1,295.31	0.0	1,458.03	70
J-15	1,286.20	0.0	1,458.03	74
J-16	1,286.20	0.0	1,458.03	74
J-19	1,295.33	0.0	1,458.03	70
J-20	1,296.92	0.0	1,458.06	70
J-21	1,296.71	0.0	1,458.06	70
J-22	1,290.04	0.0	1,458.05	73
J-23	1,290.02	1.0	1,458.05	73
J-24	1,293.63	0.0	1,458.02	71
J-25	1,293.62	0.0	1,458.02	71
J-26	1,291.44	0.0	1,458.02	72
J-27	1,291.45	3.0	1,458.02	72
J-28	1,282.60	0.0	1,457.97	76
J-29	1,282.58	0.0	1,457.97	76
J-30	1,291.91	0.0	1,458.01	72
J-31	1,291.90	3.0	1,458.01	72
J-32	1,288.87	0.0	1,458.04	73
J-33	1,288.88	0.0	1,458.04	73
J-34	1,280.00	0.0	1,457.97	77
J-35	1,280.00	3.0	1,457.97	77
J-36	1,290.00	2.0	1,458.00	73
J-37	1,290.00	0.0	1,458.00	73
J-38	1,286.06	0.0	1,458.03	74
J-39	1,286.06	0.0	1,458.03	74
J-40	1,287.34	0.0	1,458.03	74
J-41	1,287.33	0.0	1,458.03	74
J-42	1,286.02	0.0	1,458.03	74
J-43	1,286.02	0.0	1,458.03	74
J-52	1,282.73	3.0	1,458.00	76
J-53	1,282.76	0.0	1,458.00	76
J-56	1,284.34	0.0	1,458.00	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-57	1,284.34	0.0	1,458.00	75
J-63	1,288.88	0.0	1,458.04	73
J-64	1,288.88	0.0	1,458.04	73
J-65	1,289.81	3.0	1,458.01	73
J-66	1,289.79	0.0	1,458.01	73
J-67	1,300.00	0.0	1,458.07	68
J-68	1,300.00	0.0	1,458.07	68
J-69	1,300.00	0.0	1,458.07	68
J-70	1,300.00	0.0	1,458.07	68
J-73	1,281.08	0.0	1,458.03	77
J-74	1,281.07	0.0	1,458.03	77
J-75	1,281.71	3.0	1,457.97	76
J-76	1,281.72	0.0	1,457.97	76
J-77	1,290.00	0.0	1,458.02	73
J-78	1,290.00	2.0	1,458.02	73
J-79	1,282.29	3.0	1,457.98	76
J-80	1,282.26	0.0	1,457.98	76
J-81	1,294.53	0.0	1,458.02	71
J-82	1,294.54	0.0	1,458.02	71
J-83	1,288.32	0.0	1,458.03	73
J-84	1,288.30	0.0	1,458.03	73
J-85	1,290.29	2.0	1,458.02	73
J-86	1,290.32	0.0	1,458.02	73
J-87	1,282.10	0.0	1,458.00	76
J-88	1,282.07	2.0	1,458.00	76
J-91	1,282.43	0.0	1,457.97	76
J-92	1,282.41	0.0	1,457.97	76
J-93	1,286.20	0.0	1,458.03	74
J-94	1,286.19	0.0	1,458.03	74
J-95	1,287.69	0.0	1,458.03	74
J-96	1,287.71	0.0	1,458.03	74
J-97	1,287.75	0.0	1,458.03	74
J-98	1,287.77	5.0	1,458.03	74
J-99	1,287.97	0.0	1,458.03	74
J-100	1,287.97	0.0	1,458.03	74
J-101	1,288.28	0.0	1,458.03	73
J-102	1,288.30	0.0	1,458.03	73
J-105	1,285.07	0.0	1,457.99	75
J-106	1,285.10	2.0	1,457.99	75
J-107	1,296.73	2.0	1,458.03	70
J-108	1,296.73	0.0	1,458.03	70
J-115	1,287.08	0.0	1,458.03	74

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-116	1,287.10	0.0	1,458.04	74
J-117	1,299.66	0.0	1,458.07	69
J-118	1,299.61	0.0	1,458.07	69
J-123	1,300.00	0.0	1,458.09	68
J-124	1,300.00	0.0	1,458.09	68
J-125	1,280.00	0.0	1,458.01	77
J-126	1,280.00	0.0	1,458.01	77
J-128	1,282.74	0.0	1,457.99	76
J-129	1,282.74	2.0	1,457.99	76
J-130	1,282.41	0.0	1,457.97	76
J-131	1,282.41	0.0	1,457.97	76
J-132	1,287.94	0.0	1,458.04	74
J-133	1,287.95	0.0	1,458.04	74
J-134	1,287.33	0.0	1,458.02	74
J-135	1,287.29	0.0	1,458.02	74
J-136	1,287.37	2.0	1,458.01	74
J-137	1,287.36	0.0	1,458.01	74
J-138	1,280.26	0.0	1,457.99	77
J-139	1,280.30	0.0	1,457.99	77
J-140	1,280.86	0.0	1,457.99	77
J-141	1,280.83	1.0	1,457.99	77
J-142	1,288.87	0.0	1,458.04	73
J-143	1,288.87	0.0	1,458.04	73
J-144	1,280.00	0.0	1,458.01	77
J-145	1,280.00	0.0	1,458.01	77
J-146	1,284.22	0.0	1,458.02	75
J-147	1,284.23	0.0	1,458.02	75
J-148	1,282.74	0.0	1,457.97	76
J-149	1,282.75	0.0	1,457.97	76
J-150	1,282.53	0.0	1,458.02	76
J-151	1,282.57	0.0	1,458.02	76
J-152	1,300.00	0.0	1,458.07	68
J-153	1,300.00	0.0	1,458.07	68
J-154	1,300.00	0.0	1,458.07	68
J-155	1,300.00	0.0	1,458.07	68
J-160	1,285.34	0.0	1,458.02	75
J-161	1,285.38	0.0	1,458.02	75
J-162	1,300.00	0.0	1,458.07	68
J-163	1,300.00	0.0	1,458.07	68
J-164	1,287.53	0.0	1,458.04	74
J-165	1,287.55	0.0	1,458.04	74
J-166	1,284.46	0.0	1,457.99	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-167	1,284.51	2.0	1,457.99	75
J-170	1,280.00	0.0	1,457.97	77
J-173	1,283.43	0.0	1,458.03	76
J-174	1,283.62	0.0	1,458.03	75
J-179	1,293.02	0.0	1,458.02	71
J-180	1,293.00	2.0	1,458.02	71
J-181	1,280.00	0.0	1,458.01	77
J-182	1,280.00	0.0	1,458.01	77
J-183	1,280.00	2.0	1,458.03	77
J-184	1,280.00	0.0	1,458.03	77
J-185	1,282.23	0.0	1,458.02	76
J-186	1,282.18	0.0	1,458.02	76
J-187	1,294.21	0.0	1,458.02	71
J-188	1,294.19	0.0	1,458.02	71
J-189	1,286.00	0.0	1,458.00	74
J-190	1,285.95	1.0	1,458.00	74
J-193	1,290.04	0.0	1,458.02	73
J-195	1,287.68	0.0	1,458.04	74
J-196	1,287.66	0.0	1,458.04	74
J-197	1,283.22	0.0	1,457.99	76
J-198	1,283.22	0.0	1,457.99	76
J-199	1,288.46	0.0	1,458.04	73
J-200	1,288.48	0.0	1,458.04	73
J-203	1,282.25	0.0	1,457.99	76
J-204	1,282.24	2.0	1,457.99	76
J-205	1,288.69	0.0	1,458.04	73
J-212	1,290.41	0.0	1,458.01	73
J-213	1,290.38	3.0	1,458.01	73
J-214	1,295.27	0.0	1,458.03	70
J-215	1,295.85	0.0	1,458.06	70
J-216	1,295.80	0.0	1,458.06	70
J-217	1,288.26	0.0	1,458.03	73
J-218	1,288.29	0.0	1,458.03	73
J-219	1,288.80	1.0	1,458.04	73
J-220	1,288.83	0.0	1,458.04	73
J-221	1,294.52	6.0	1,458.00	71
J-222	1,294.50	0.0	1,458.00	71
J-227	1,280.00	0.0	1,458.01	77
J-232	1,286.38	0.0	1,458.03	74
J-233	1,286.35	0.0	1,458.03	74
J-234	1,282.61	3.0	1,457.97	76
J-235	1,282.14	0.0	1,458.02	76



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-236	1,282.11	0.0	1,458.02	76
J-239	1,282.11	0.0	1,458.02	76
J-240	1,290.00	0.0	1,458.02	73
J-241	1,290.00	0.0	1,458.02	73
J-242	1,290.00	0.0	1,458.02	73
J-243	1,290.00	0.0	1,458.02	73
J-252	1,282.06	0.0	1,458.03	76
J-253	1,282.03	0.0	1,458.03	76
J-254	1,291.78	0.0	1,458.02	72
J-255	1,291.80	0.0	1,458.02	72
J-256	1,290.00	0.0	1,458.02	73
J-257	1,282.23	0.0	1,458.02	76
J-259	1,283.04	0.0	1,458.03	76
J-260	1,282.85	0.0	1,458.03	76
J-261	1,286.03	0.0	1,458.03	74
J-262	1,286.06	2.0	1,458.03	74
J-263	1,290.00	0.0	1,458.02	73
J-264	1,282.88	0.0	1,457.97	76
J-265	1,282.80	0.0	1,457.97	76
J-266	1,282.32	0.0	1,458.02	76
J-271	1,300.00	2.0	1,458.07	68
J-272	1,300.00	0.0	1,458.07	68
J-273	1,282.48	1.0	1,457.97	76
J-274	1,282.44	0.0	1,457.97	76
J-276	1,287.84	0.0	1,458.02	74
J-277	1,287.86	0.0	1,458.02	74
J-278	1,282.73	0.0	1,457.97	76
J-279	1,282.74	0.0	1,457.97	76
J-280	1,288.87	0.0	1,458.04	73
J-281	1,286.24	0.0	1,458.03	74
J-282	1,287.88	0.0	1,458.02	74
J-284	1,289.28	0.0	1,458.03	73
J-285	1,289.33	0.0	1,458.03	73
J-286	1,298.92	2.0	1,458.07	69
J-287	1,298.85	0.0	1,458.07	69
J-290	1,285.77	0.0	1,458.03	75
J-291	1,286.38	0.0	1,458.03	74
J-292	1,300.00	0.0	1,458.07	68
J-293	1,300.00	0.0	1,458.07	68
J-294	1,300.00	0.0	1,458.07	68
J-295	1,300.00	0.0	1,458.07	68
J-296	1,300.00	0.0	1,458.07	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-297	1,300.00	0.0	1,458.07	68
J-298	1,287.88	0.0	1,458.02	74
J-299	1,291.84	0.0	1,458.02	72
J-302	1,300.00	0.0	1,458.07	68
J-305	1,287.21	0.0	1,458.02	74
J-306	1,287.32	0.0	1,458.02	74
J-307	1,288.89	0.0	1,458.04	73
J-311	1,300.00	0.0	1,458.07	68
J-312	1,299.91	0.0	1,458.07	68
J-314	1,282.43	0.0	1,458.02	76
J-315	1,282.43	0.0	1,458.02	76
J-321	1,300.00	0.0	1,458.07	68
J-322	1,300.00	0.0	1,458.07	68
J-323	1,286.23	0.0	1,458.03	74
J-324	1,286.30	0.0	1,458.03	74
J-325	1,286.06	0.0	1,458.03	74
J-326	1,286.10	0.0	1,458.03	74
J-327	1,300.00	0.0	1,458.07	68
J-330	1,287.12	0.0	1,458.03	74
J-333	1,290.06	0.0	1,458.03	73
J-334	1,290.00	0.0	1,458.03	73
J-336	1,299.05	0.0	1,458.03	69
J-337	1,299.07	0.0	1,458.03	69
J-338	1,300.00	0.0	1,458.07	68
J-339	1,300.00	0.0	1,458.07	68
J-340	1,287.48	0.0	1,458.03	74
J-341	1,287.57	0.0	1,458.03	74
J-342	1,300.00	0.0	1,458.07	68
J-345	1,288.34	0.0	1,458.03	73
J-346	1,285.59	0.0	1,458.03	75
J-347	1,300.00	1.0	1,458.08	68
J-348	1,300.00	0.0	1,458.08	68
J-349	1,293.78	0.0	1,458.02	71
J-350	1,293.92	0.0	1,458.02	71
J-355	1,286.32	0.0	1,458.03	74
J-356	1,280.00	0.0	1,458.00	77
J-357	1,280.00	2.0	1,458.00	77
J-358	1,281.00	0.0	1,457.99	77
J-359	1,281.04	0.0	1,457.99	77
J-361	1,282.53	0.0	1,457.97	76
J-362	1,282.60	2.0	1,457.97	76
J-363	1,300.00	0.0	1,458.07	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-364	1,300.00	0.0	1,458.07	68
J-365	1,290.00	1.0	1,458.03	73
J-366	1,290.00	0.0	1,458.03	73
J-367	1,286.28	0.0	1,458.03	74
J-368	1,286.34	0.0	1,458.03	74
J-369	1,290.00	0.0	1,458.03	73
J-370	1,290.00	0.0	1,458.03	73
J-371	1,280.00	0.0	1,458.01	77
J-372	1,280.00	0.0	1,458.01	77
J-373	1,290.21	0.0	1,458.03	73
J-374	1,290.16	0.0	1,458.03	73
J-375	1,288.34	0.0	1,458.02	73
J-377	1,290.00	0.0	1,458.03	73
J-378	1,290.00	0.0	1,458.03	73
J-382	1,300.00	0.0	1,458.07	68
J-383	1,300.00	0.0	1,458.08	68
J-384	1,300.00	0.0	1,458.09	68
J-385	1,294.82	0.0	1,458.02	71
J-386	1,294.65	0.0	1,458.02	71
J-387	1,293.18	0.0	1,458.02	71
J-389	1,280.00	2.0	1,458.00	77
J-390	1,280.00	0.0	1,458.00	77
J-391	1,293.13	0.0	1,458.02	71
J-393	1,300.00	0.0	1,458.07	68
J-394	1,299.97	0.0	1,458.07	68
J-395	1,300.00	0.0	1,458.07	68
J-396	1,300.00	0.0	1,458.07	68
J-397	1,289.50	0.0	1,458.03	73
J-398	1,286.59	0.0	1,458.03	74
J-399	1,286.50	0.0	1,458.03	74
J-400	1,293.77	0.0	1,458.02	71
J-401	1,293.66	0.0	1,458.02	71
J-402	1,288.43	0.0	1,458.04	73
J-403	1,287.92	0.0	1,458.03	74
J-404	1,287.79	0.0	1,458.03	74
J-405	1,300.00	0.0	1,458.07	68
J-406	1,300.00	0.0	1,458.07	68
J-407	1,299.84	0.0	1,458.07	68
J-408	1,299.64	0.0	1,458.07	69
J-409	1,289.66	0.0	1,458.04	73
J-410	1,289.78	0.0	1,458.04	73
J-411	1,300.00	0.0	1,458.07	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-412	1,300.00	0.0	1,458.07	68
J-413	1,300.00	0.0	1,458.07	68
J-414	1,286.64	0.0	1,458.03	74
J-415	1,287.00	0.0	1,458.03	74
J-416	1,293.68	0.0	1,458.02	71
J-417	1,299.52	0.0	1,458.07	69
J-418	1,289.42	2.0	1,458.04	73
J-419	1,289.36	0.0	1,458.04	73
J-421	1,290.23	0.0	1,458.02	73
J-422	1,290.24	0.0	1,458.02	73
J-423	1,293.26	0.0	1,458.02	71
J-425	1,294.44	2.0	1,458.02	71
J-426	1,293.12	0.0	1,458.02	71
J-427	1,293.03	0.0	1,458.02	71
J-428	1,294.24	0.0	1,458.02	71
J-429	1,294.04	0.0	1,458.02	71
J-430	1,286.20	0.0	1,458.03	74
J-431	1,286.36	0.0	1,458.03	74
J-432	1,286.47	0.0	1,458.03	74
J-434	1,286.19	0.0	1,458.03	74
J-435	1,287.44	2.0	1,458.03	74
J-436	1,280.00	0.0	1,458.01	77
J-437	1,282.31	0.0	1,457.97	76
J-438	1,287.29	0.0	1,458.03	74
J-439	1,287.36	0.0	1,458.03	74
J-440	1,290.00	0.0	1,458.03	73
J-441	1,290.00	0.0	1,458.03	73
J-442	1,290.00	0.0	1,458.02	73
J-443	1,290.00	0.0	1,458.02	73
J-444	1,288.18	0.0	1,458.02	73
J-446	1,294.31	0.0	1,458.02	71
J-447	1,290.00	0.0	1,458.03	73
J-448	1,287.18	0.0	1,458.02	74
J-449	1,287.13	0.0	1,458.02	74
J-450	1,285.92	0.0	1,458.02	74
J-451	1,285.80	0.0	1,458.02	75
J-453	1,284.32	0.0	1,458.02	75
J-454	1,284.01	0.0	1,458.02	75
J-456	1,290.26	0.0	1,458.02	73
J-457	1,286.15	0.0	1,458.03	74
J-458	1,300.00	0.0	1,458.07	68
J-459	1,300.00	0.0	1,458.07	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-460	1,280.00	0.0	1,458.01	77
J-461	1,280.00	0.0	1,458.01	77
J-462	1,287.98	0.0	1,458.04	74
J-463	1,287.94	0.0	1,458.04	74
J-464	1,300.00	0.0	1,458.07	68
J-465	1,300.00	0.0	1,458.07	68
J-466	1,282.42	0.0	1,458.02	76
J-467	1,288.08	1.0	1,458.03	74
J-468	1,288.27	0.0	1,458.03	73
J-469	1,283.38	0.0	1,458.02	76
J-470	1,283.23	0.0	1,458.02	76
J-471	1,299.01	0.0	1,458.07	69
J-472	1,287.57	0.0	1,458.03	74
J-473	1,287.52	0.0	1,458.03	74
J-475	1,287.67	0.0	1,458.04	74
J-476	1,282.27	0.0	1,457.99	76
J-477	1,281.94	0.0	1,457.99	76
J-478	1,300.00	0.0	1,458.07	68
J-479	1,299.86	0.0	1,458.07	68
J-480	1,299.61	1.0	1,458.07	69
J-483	1,298.69	1.0	1,458.03	69
J-484	1,300.00	0.0	1,458.07	68
J-485	1,288.36	0.0	1,458.02	73
J-487	1,280.00	0.0	1,458.03	77
J-489	1,280.82	0.0	1,458.03	77
J-491	1,280.00	0.0	1,458.03	77
J-492	1,280.00	0.0	1,458.03	77
J-496	1,286.29	0.0	1,458.03	74
J-498	1,287.40	0.0	1,458.03	74
J-499	1,282.76	0.0	1,457.97	76
J-500	1,280.00	0.0	1,458.01	77
J-501	1,286.30	0.0	1,458.03	74
J-502	1,286.55	0.0	1,458.03	74
J-504	1,286.78	0.0	1,458.03	74
J-505	1,287.22	0.0	1,458.04	74
J-506	1,287.19	0.0	1,458.03	74
J-509	1,284.54	0.0	1,458.03	75
J-510	1,285.23	0.0	1,458.03	75
J-511	1,299.59	0.0	1,458.07	69
J-512	1,280.00	0.0	1,458.02	77
J-513	1,285.85	0.0	1,458.03	74
J-514	1,286.50	0.0	1,458.03	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-516	1,290.00	1.0	1,458.05	73
J-518	1,285.84	0.0	1,458.03	75
J-519	1,290.31	0.0	1,458.02	73
J-520	1,293.47	2.0	1,458.02	71
J-524	1,281.77	0.0	1,458.03	76
J-526	1,287.21	0.0	1,458.04	74
J-528	1,289.60	0.0	1,458.04	73
J-531	1,281.18	0.0	1,458.03	77
J-532	1,287.52	0.0	1,458.02	74
J-533	1,294.10	0.0	1,458.02	71
J-534	1,293.74	0.0	1,458.02	71
J-535	1,287.45	0.0	1,458.04	74
J-536	1,287.54	0.0	1,458.03	74
J-537	1,288.06	0.0	1,458.04	74
J-543	1,285.32	0.0	1,458.02	75
J-544	1,290.00	1.0	1,458.05	73
J-546	1,286.30	0.0	1,458.03	74
J-547	1,281.20	1.0	1,457.99	76
J-550	1,288.60	0.0	1,458.04	73
J-551	1,289.52	1.0	1,458.04	73
J-552	1,299.98	0.0	1,458.07	68
J-557	1,284.17	0.0	1,458.02	75
J-558	1,282.88	2.0	1,457.97	76
J-559	1,282.73	0.0	1,457.97	76
J-560	1,282.06	1.0	1,457.99	76
J-561	1,283.24	2.0	1,457.99	76
J-562	1,286.82	0.0	1,458.03	74
J-563	1,290.00	0.0	1,458.02	73
J-565	1,285.36	0.0	1,457.99	75
J-568	1,287.63	0.0	1,458.03	74
J-571	1,293.10	0.0	1,458.02	71
J-572	1,282.00	0.0	1,457.99	76
J-573	1,292.36	0.0	1,458.05	72
J-578	1,294.30	1.0	1,458.05	71
J-579	1,280.00	0.0	1,458.03	77
J-580	1,290.00	0.0	1,458.02	73
J-581	1,287.61	2.0	1,458.03	74
J-582	1,280.00	0.0	1,458.00	77
J-583	1,286.49	0.0	1,458.04	74
J-585	1,290.00	2.0	1,458.02	73
J-587	1,293.57	3.0	1,457.99	71
J-588	1,296.06	1.0	1,458.04	70

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-590	1,284.18	2.0	1,458.01	75
J-591	1,293.46	5.0	1,457.99	71
J-592	1,290.15	0.0	1,458.02	73
J-593	1,290.05	0.0	1,458.02	73
J-594	1,280.96	0.0	1,457.97	77
J-596	1,287.73	0.0	1,458.04	74
J-597	1,280.52	0.0	1,458.02	77
J-598	1,283.73	0.0	1,458.03	75
J-599	1,282.35	0.0	1,458.03	76
J-600	1,289.29	1.0	1,458.03	73
J-602	1,280.00	0.0	1,458.03	77
J-605	1,280.25	3.0	1,457.99	77
J-606	1,280.72	1.0	1,457.99	77
J-607	1,282.85	0.0	1,458.03	76
J-608	1,289.62	0.0	1,458.02	73
J-609	1,284.63	1.0	1,457.99	75
J-610	1,298.28	0.0	1,458.07	69
J-613	1,287.22	1.0	1,458.03	74
J-614	1,286.42	0.0	1,458.03	74
J-615	1,284.29	0.0	1,458.00	75
J-616	1,287.06	5.0	1,458.00	74
J-617	1,294.88	1.0	1,458.06	71
J-618	1,297.09	0.0	1,458.06	70
J-619	1,291.42	0.0	1,458.02	72
J-620	1,280.00	0.0	1,458.02	77
J-621	1,289.98	5.0	1,458.00	73
J-622	1,288.84	5.0	1,458.00	73
J-623	1,287.65	0.0	1,458.02	74
J-624	1,294.76	0.0	1,458.02	71
J-625	1,287.04	0.0	1,458.02	74
J-626	1,300.00	0.0	1,458.07	68
J-627	1,280.00	0.0	1,458.02	77
J-628	1,282.30	0.0	1,458.02	76
J-629	1,287.12	2.0	1,458.02	74
J-630	1,287.21	2.0	1,458.02	74
J-632	1,287.88	3.0	1,458.01	74
J-633	1,285.82	2.0	1,458.00	74
J-635	1,300.00	0.0	1,458.06	68
J-638	1,293.02	0.0	1,458.05	71
J-639	1,293.71	0.0	1,458.02	71
J-640	1,293.11	0.0	1,458.02	71
J-641	1,293.07	0.0	1,458.02	71



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-642	1,290.16	0.0	1,458.02	73
J-643	1,290.00	0.0	1,458.04	73
J-646	1,287.37	0.0	1,458.03	74
J-647	1,290.63	6.0	1,458.01	72
J-648	1,283.82	1.0	1,458.00	75
J-649	1,289.38	0.0	1,458.04	73
J-651	1,290.10	2.0	1,458.00	73
J-652	1,289.27	0.0	1,458.03	73
J-656	1,293.63	3.0	1,458.01	71
J-657	1,296.44	3.0	1,458.03	70
J-658	1,294.35	4.0	1,458.03	71
J-661	1,300.00	0.0	1,458.07	68
J-662	1,287.37	0.0	1,458.04	74
J-664	1,300.00	2.0	1,458.07	68
J-665	1,298.00	3.0	1,458.04	69
J-667	1,282.25	0.0	1,458.02	76
J-673	1,294.74	0.0	1,458.02	71
J-1	1,280.00	0.0	1,458.02	77
J-2	1,280.00	0.0	1,458.02	77
J-5	1,280.32	0.0	1,458.02	77
J-6	1,280.33	0.0	1,458.02	77
J-7	1,280.26	0.0	1,458.02	77
J-8	1,280.27	0.0	1,458.02	77
J-9	1,280.00	0.0	1,458.02	77
J-10	1,280.00	0.0	1,458.02	77
J-13	1,280.00	0.0	1,458.02	77
J-14	1,280.00	0.0	1,458.02	77
J-15	1,280.00	0.0	1,458.02	77
J-16	1,280.00	0.0	1,458.02	77
J-17	1,280.00	0.0	1,458.02	77
J-18	1,280.00	0.0	1,458.02	77
J-19	1,280.00	0.0	1,458.02	77
J-20	1,280.00	0.0	1,458.02	77
J-21	1,280.00	0.0	1,458.03	77
J-22	1,280.00	0.0	1,458.03	77
J-23	1,280.20	0.0	1,458.02	77
J-24	1,280.23	0.0	1,458.02	77
J-33	1,280.00	0.0	1,458.02	77
J-34	1,280.00	0.0	1,458.02	77
J-43	1,280.00	0.0	1,458.02	77
J-44	1,280.00	0.0	1,458.02	77
J-47	1,280.00	0.0	1,458.02	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-48	1,280.00	0.0	1,458.02	77
J-49	1,280.29	0.0	1,458.02	77
J-50	1,280.32	0.0	1,458.02	77
J-51	1,283.91	0.0	1,458.02	75
J-52	1,283.91	0.0	1,458.02	75
J-53	1,281.92	0.0	1,458.02	76
J-54	1,281.95	0.0	1,458.02	76
J-55	1,280.00	0.0	1,458.02	77
J-56	1,280.00	0.0	1,458.02	77
J-61	1,280.00	0.0	1,458.02	77
J-62	1,280.00	0.0	1,458.02	77
J-63	1,280.00	0.0	1,458.03	77
J-64	1,280.00	0.0	1,458.03	77
J-65	1,280.00	0.0	1,458.03	77
J-66	1,280.00	0.0	1,458.03	77
J-67	1,280.00	0.0	1,458.02	77
J-68	1,280.00	0.0	1,458.02	77
J-69	1,280.00	0.0	1,458.02	77
J-70	1,280.00	0.0	1,458.02	77
J-71	1,280.00	0.0	1,458.02	77
J-72	1,280.00	0.0	1,458.02	77
J-73	1,280.00	0.0	1,458.02	77
J-74	1,280.00	0.0	1,458.02	77
J-77	1,280.00	0.0	1,458.02	77
J-78	1,280.00	0.0	1,458.02	77
J-81	1,280.00	0.0	1,458.02	77
J-82	1,280.00	0.0	1,458.02	77
J-85	1,280.00	0.0	1,458.02	77
J-86	1,280.00	0.0	1,458.02	77
J-91	1,280.00	0.0	1,458.02	77
J-101	1,280.00	0.0	1,458.02	77
J-102	1,280.00	0.0	1,458.02	77
J-106	1,280.00	0.0	1,458.02	77
J-107	1,280.00	0.0	1,458.02	77
J-120	1,280.41	0.0	1,458.02	77
J-121	1,280.41	0.0	1,458.02	77
J-125	1,280.00	0.0	1,458.02	77
J-126	1,280.00	0.0	1,458.02	77
J-129	1,286.89	0.0	1,458.02	74
J-131	1,280.34	0.0	1,458.02	77
J-132	1,280.25	0.0	1,458.02	77
J-137	1,280.00	0.0	1,458.02	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-138	1,280.00	0.0	1,458.02	77
J-139	1,280.00	0.0	1,458.02	77
J-140	1,280.00	0.0	1,458.02	77
J-142	1,280.00	0.0	1,458.02	77
J-143	1,280.00	0.0	1,458.02	77
J-150	1,280.00	0.0	1,458.02	77
J-151	1,280.00	0.0	1,458.02	77
J-152	1,280.00	0.0	1,458.02	77
J-153	1,280.00	0.0	1,458.02	77
J-154	1,280.00	0.0	1,458.02	77
J-155	1,280.00	0.0	1,458.02	77
J-156	1,280.00	0.0	1,458.02	77
J-157	1,280.00	0.0	1,458.02	77
J-163	1,280.00	0.0	1,458.02	77
J-164	1,280.00	0.0	1,458.02	77
J-165	1,280.00	0.0	1,458.02	77
J-166	1,280.00	0.0	1,458.02	77
J-167	1,280.00	0.0	1,458.03	77
J-168	1,280.00	0.0	1,458.02	77
J-169	1,280.00	0.0	1,458.02	77
J-171	1,280.00	0.0	1,458.02	77
J-172	1,280.00	0.0	1,458.02	77
J-177	1,280.00	0.0	1,458.02	77
J-178	1,280.00	0.0	1,458.02	77
J-181	1,284.14	0.0	1,458.02	75
J-185	1,280.00	0.0	1,458.02	77
J-186	1,280.00	0.0	1,458.02	77
J-189	1,280.00	0.0	1,458.02	77
J-190	1,280.00	0.0	1,458.02	77
J-191	1,280.00	0.0	1,458.02	77
J-192	1,280.00	0.0	1,458.02	77
J-193	1,280.00	0.0	1,458.02	77
J-194	1,280.00	0.0	1,458.02	77
J-195	1,280.46	0.0	1,458.02	77
J-196	1,280.32	0.0	1,458.02	77
J-197	1,283.77	0.0	1,458.02	75
J-200	1,280.00	0.0	1,458.02	77
J-201	1,280.00	0.0	1,458.02	77
J-202	1,280.09	0.0	1,458.02	77
J-203	1,280.00	0.0	1,458.02	77
J-204	1,280.11	0.0	1,458.02	77
J-209	1,280.12	0.0	1,458.02	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-210	1,280.00	0.0	1,458.02	77
J-212	1,280.00	0.0	1,458.02	77
J-213	1,280.00	0.0	1,458.02	77
J-214	1,280.00	0.0	1,458.02	77
J-215	1,280.00	0.0	1,458.02	77
J-222	1,280.21	0.0	1,458.02	77
J-223	1,280.00	0.0	1,458.02	77
J-224	1,280.00	0.0	1,458.02	77
J-225	1,280.00	0.0	1,458.02	77
J-226	1,280.00	0.0	1,458.02	77
J-227	1,280.00	0.0	1,458.02	77
J-229	1,284.25	0.0	1,458.02	75
J-231	1,280.00	0.0	1,458.02	77
J-232	1,285.15	0.0	1,458.02	75
J-233	1,285.17	0.0	1,458.02	75
J-235	1,281.81	0.0	1,458.02	76
J-237	1,283.17	0.0	1,458.02	76
J-239	1,285.61	0.0	1,458.02	75
J-242	1,286.43	0.0	1,458.02	74
J-244	1,280.00	0.0	1,458.02	77
J-245	1,280.00	0.0	1,458.02	77
J-246	1,280.00	0.0	1,458.02	77
J-247	1,280.00	0.0	1,458.02	77
J-250	1,283.79	0.0	1,458.02	75
J-254	1,280.26	0.0	1,458.02	77
J-255	1,280.53	0.0	1,458.02	77
J-260	1,280.00	0.0	1,458.02	77
J-262	1,280.08	0.0	1,458.02	77
J-263	1,280.02	0.0	1,458.02	77
J-266	1,280.00	0.0	1,458.02	77
J-268	1,280.56	0.0	1,458.02	77
J-270	1,280.00	0.0	1,458.02	77
J-272	1,285.07	0.0	1,458.02	75
J-276	1,280.00	0.0	1,458.02	77
J-277	1,280.00	0.0	1,458.02	77
J-282	1,283.67	0.0	1,458.02	75
J-284	1,280.00	0.0	1,458.02	77
J-287	1,280.00	0.0	1,458.02	77
J-291	1,280.00	0.0	1,458.03	77
J-293	1,280.00	0.0	1,458.03	77
J-296	1,280.00	0.0	1,458.02	77
J-297	1,280.00	0.0	1,458.02	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-298	1,280.00	0.0	1,458.02	77
J-301	1,280.00	0.0	1,458.02	77
J-302	1,280.00	0.0	1,458.02	77
J-312	1,280.00	0.0	1,458.02	77
J-321	1,280.00	0.0	1,458.02	77
J-322	1,280.00	0.0	1,458.02	77
J-324	1,280.00	0.0	1,458.03	77
J-325	1,280.00	0.0	1,458.03	77
J-326	1,280.00	0.0	1,458.02	77
J-327	1,280.00	0.0	1,458.02	77
J-331	1,280.00	0.0	1,458.02	77
J-332	1,280.00	0.0	1,458.02	77
J-336	1,280.00	0.0	1,458.02	77
J-340	1,280.00	0.0	1,458.02	77
J-343	1,280.00	0.0	1,458.02	77
J-349	1,280.00	0.0	1,458.02	77
J-353	1,280.00	0.0	1,458.02	77
J-355	1,280.00	0.0	1,458.02	77
J-363	1,280.00	0.0	1,458.02	77
J-365	1,280.00	0.0	1,458.02	77
J-366	1,280.55	0.0	1,458.02	77
J-367	1,280.00	0.0	1,458.02	77
J-370	1,280.00	0.0	1,458.02	77
J-372	1,280.00	0.0	1,458.02	77
J-373	1,280.00	0.0	1,458.02	77
J-375	1,280.00	0.0	1,458.02	77
J-378	1,280.00	0.0	1,458.03	77
J-380	1,291.16	3.0	1,458.03	72
J-381	1,290.64	2.0	1,458.02	72
J-382	1,291.34	1.0	1,458.02	72
J-383	1,292.53	3.0	1,458.01	72
J-384	1,293.13	2.0	1,458.02	71
J-385	1,291.24	2.0	1,458.02	72
J-386	1,292.88	1.0	1,458.01	71
J-387	1,290.03	2.0	1,458.03	73
J-388	1,295.17	4.0	1,458.03	70
J-389	1,298.00	2.0	1,458.05	69
J-391	1,296.18	4.0	1,458.04	70
J-392	1,299.02	3.0	1,458.05	69
J-394	1,298.41	3.0	1,458.06	69
J-397	1,290.98	5.0	1,458.00	72
J-398	1,287.47	3.0	1,458.02	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-401	1,294.11	0.0	1,458.02	71
J-403	1,296.44	0.0	1,458.04	70
J-404	1,300.00	0.0	1,458.07	68
J-405	1,287.46	0.0	1,458.03	74
J-408	1,297.02	0.0	1,458.06	70
J-410	1,287.47	0.0	1,458.01	74
J-412	1,287.12	0.0	1,458.01	74
J-414	1,282.85	0.0	1,457.97	76
J-421	1,300.00	0.0	1,458.08	68
J-432	1,296.44	0.0	1,458.04	70

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
1907	1,015	J-661	J-626	30	Ductile Iron	130	0.0	84.00	0.0400
1908	62	J-464	J-465	12	Ductile Iron	130	0.0	-84.00	0.2400
3565	8	J-166	J-167	6	Ductile Iron	130	0.0	0.00	0.0000
3566	6	J-105	J-106	6	Ductile Iron	130	0.0	0.00	0.0000
3961	6	J-93	J-94	6	Ductile Iron	130	0.0	0.00	0.0000
3962	49	J-15	J-326	16	Ductile Iron	130	0.0	1.00	0.0000
3963	2	J-15	J-16	16	Ductile Iron	130	0.0	-1.00	0.0000
3983	526	J-573	J-544	8	Ductile Iron	130	0.0	15.00	0.1000
4153	512	J-618	J-610	8	Ductile Iron	130	0.0	-16.00	0.1000
4154	14	J-215	J-216	6	Ductile Iron	130	0.0	0.00	0.0000
4308	289	J-585	J-78	6	Ductile Iron	130	0.0	-3.00	0.0300
4311	9	J-189	J-190	6	Ductile Iron	130	0.0	0.00	0.0000
4312	305	J-222	J-587	6	Ductile Iron	130	0.0	8.00	0.0900
8447	57	J-68	J-342	16	Ductile Iron	130	0.0	0.00	0.0000
8449	40	J-382	J-67	16	Ductile Iron	130	0.0	-97.00	0.1500
8823	20	J-302	J-70	12	Ductile Iron	130	0.0	0.00	0.0000
8825	75	J-478	J-322	12	Ductile Iron	130	0.0	13.00	0.0400
12390	66	J-465	J-393	12	Ductile Iron	130	0.0	16.00	0.0500
12392	31	J-338	J-339	6	Ductile Iron	130	0.0	0.00	0.0000
12393	297	J-411	J-363	12	Ductile Iron	130	0.0	-16.00	0.0500
12395	981	J-221	J-657	6	Ductile Iron	130	0.0	-17.00	0.1900
12397	682	J-367	J-646	6	Ductile Iron	130	0.0	1.00	0.0100
12398	4	J-32	J-33	6	Ductile Iron	130	0.0	0.00	0.0000
12400	159	J-550	J-551	6	Ductile Iron	130	0.0	1.00	0.0100
12401	236	J-550	J-32	6	Ductile Iron	130	0.0	-6.00	0.0600
12402	1,024	J-502	J-550	6	Ductile Iron	130	0.0	-5.00	0.0500
14457	1,098	J-476	J-359	6	Ductile Iron	130	0.0	1.00	0.0100
14458	206	J-561	J-476	6	Ductile Iron	130	0.0	4.00	0.0500
14459	34	J-358	J-359	6	Ductile Iron	130	0.0	0.00	0.0000
14460	442	J-204	J-129	6	Ductile Iron	130	0.0	-1.00	0.0200
14461	11	J-203	J-204	6	Ductile Iron	130	0.0	0.00	0.0000
14462	7	J-128	J-129	6	Ductile Iron	130	0.0	0.00	0.0000
14463	11	J-197	J-198	6	Ductile Iron	130	0.0	0.00	0.0000
14465	447	J-565	J-561	6	Ductile Iron	130	0.0	9.00	0.1000
14466	630	J-106	J-167	6	Ductile Iron	130	0.0	3.00	0.0300
14467	610	J-284	J-136	6	Ductile Iron	130	0.0	16.00	0.1800
14477	525	J-624	J-533	6	Ductile Iron	130	0.0	1.00	0.0100
14478	694	J-27	J-425	6	Ductile Iron	130	0.0	-3.00	0.0300
14479	657	J-639	J-640	6	Ductile Iron	130	0.0	-1.00	0.0200
14481	658	J-641	J-642	6	Ductile Iron	130	0.0	-2.00	0.0300
14483	8	J-179	J-180	6	Ductile Iron	130	0.0	0.00	0.0000
14484	10	J-212	J-213	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
14485	5	J-81	J-82	6	Ductile Iron	130	0.0	0.00	0.0000
14486	3	J-26	J-27	6	Ductile Iron	130	0.0	0.00	0.0000
14487	3	J-24	J-25	6	Ductile Iron	130	0.0	0.00	0.0000
14488	4	J-30	J-31	6	Ductile Iron	130	0.0	0.00	0.0000
14494	1,330	J-646	J-501	6	Ductile Iron	130	0.0	1.00	0.0100
14496	26	J-325	J-326	6	Ductile Iron	130	0.0	0.00	0.0000
19501	5	J-23	J-24	16	Ductile Iron	130	0.0	0.00	0.0000
19507	15	J-120	J-121	16	Ductile Iron	130	0.0	-2.00	0.0000
19510	5	J-19	J-20	12	Ductile Iron	130	0.0	0.00	0.0000
19511	5	J-17	J-18	12	Ductile Iron	130	0.0	0.00	0.0000
19512	366	J-19	J-17	16	Ductile Iron	130	0.0	-2.00	0.0000
19514	5	J-15	J-16	12	Ductile Iron	130	0.0	0.00	0.0000
19515	413	J-15	J-298	16	Ductile Iron	130	0.0	-2.00	0.0000
19516	88	J-298	J-185	16	Ductile Iron	130	0.0	-2.00	0.0000
19517	25	J-185	J-186	16	Ductile Iron	130	0.0	-2.00	0.0000
19520	39	J-186	J-231	16	Ductile Iron	130	0.0	-2.00	0.0000
19522	25	J-189	J-190	12	Ductile Iron	130	0.0	-2.00	0.0100
19526	2	J-7	J-8	0.8	Ductile Iron	130	0.0	0.00	0.0000
19527	2	J-5	J-6	0.8	Ductile Iron	130	0.0	0.00	0.0000
21371	649	J-385	J-400	16	Ductile Iron	130	0.0	-9.00	0.0100
21372	659	J-426	J-421	16	Ductile Iron	130	0.0	-32.00	0.0500
21374	349	J-439	J-432	16	Ductile Iron	130	0.0	-65.00	0.1000
21395	53	J-428	J-429	6	Ductile Iron	130	0.0	0.00	0.0000
21709	365	J-435	J-504	16	Ductile Iron	130	0.0	7.00	0.0100
21710	85	J-496	J-355	16	Ductile Iron	130	0.0	-12.00	0.0200
21711	37	J-367	J-368	6	Ductile Iron	130	0.0	0.00	0.0000
21712	13	J-232	J-233	6	Ductile Iron	130	0.0	-16.00	0.1800
21713	16	J-261	J-262	6	Ductile Iron	130	0.0	3.00	0.0300
21714	4	J-4	J-5	6	Ductile Iron	130	0.0	4.00	0.0400
21715	1	J-6	J-7	16	Ductile Iron	130	0.0	0.00	0.0000
21716	6	J-115	J-116	6	Ductile Iron	130	0.0	-51.00	0.5700
21717	1	J-1	J-3	16	Ductile Iron	130	0.0	0.00	0.0000
21718	1	J-1	J-2	16	Ductile Iron	130	0.0	0.00	0.0000
21719	26	J-323	J-324	6	Ductile Iron	130	0.0	0.00	0.0000
21720	20	J-284	J-285	6	Ductile Iron	130	0.0	-16.00	0.1800
21722	53	J-440	J-441	6	Ductile Iron	130	0.0	0.00	0.0000
21723	38	J-369	J-370	6	Ductile Iron	130	0.0	0.00	0.0000
21724	29	J-333	J-334	6	Ductile Iron	130	0.0	4.00	0.0400

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
24188	60	J-458	J-459	6	Ductile Iron	130	0.0	0.00	0.0000
24513	20	J-294	J-295	8	Ductile Iron	130	0.0	0.00	0.0000
24514	20	J-296	J-297	8	Ductile Iron	130	0.0	-1.00	0.0100
24515	45	J-405	J-411	8	Ductile Iron	130	0.0	-1.00	0.0100
24516	45	J-412	J-413	8	Ductile Iron	130	0.0	-1.00	0.0100
24517	300	J-294	J-312	8	Ductile Iron	130	0.0	0.00	0.0000
24518	303	J-296	J-479	8	Ductile Iron	130	0.0	1.00	0.0100
24519	22	J-311	J-312	6	Ductile Iron	130	0.0	0.00	0.0000
24520	74	J-479	J-480	8	Ductile Iron	130	0.0	1.00	0.0100
25253	4	J-56	J-57	6	Ductile Iron	130	0.0	0.00	0.0000
25254	6	J-36	J-37	6	Ductile Iron	130	0.0	-2.00	0.0200
25255	6	J-87	J-88	6	Ductile Iron	130	0.0	0.00	0.0000
25256	5	J-52	J-53	6	Ductile Iron	130	0.0	0.00	0.0000
25257	5	J-65	J-66	6	Ductile Iron	130	0.0	0.00	0.0000
25258	5	J-85	J-86	6	Ductile Iron	130	0.0	0.00	0.0000
25283	7	J-154	J-155	4	Ductile Iron	130	0.0	0.00	0.0000
25284	7	J-152	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
25564	299	J-588	J-214	6	Ductile Iron	130	0.0	4.00	0.0500
25565	445	J-107	J-13	6	Ductile Iron	130	0.0	-3.00	0.0400
25566	6	J-107	J-108	6	Ductile Iron	130	0.0	0.00	0.0000
25595	7	J-77	J-78	6	Ductile Iron	130	0.0	0.00	0.0000
27024	49	J-254	J-255	16	Ductile Iron	130	0.0	2.00	0.0000
27025	34	J-23	J-222	16	Ductile Iron	130	0.0	0.00	0.0000
27504	117	J-393	J-162	8	Ductile Iron	130	0.0	0.00	0.0000
27505	10	J-162	J-163	6	Ductile Iron	130	0.0	0.00	0.0000
27906	504	J-281	J-505	8	Ductile Iron	130	0.0	-13.00	0.0800
27908	632	J-505	J-402	8	Ductile Iron	130	0.0	-13.00	0.0800
27909	12	J-199	J-200	6	Ductile Iron	130	0.0	0.00	0.0000
28144	138	J-516	J-544	8	Ductile Iron	130	0.0	-14.00	0.0900
29987	75	J-483	J-336	6	Ductile Iron	130	0.0	0.00	0.0000
29988	30	J-336	J-337	6	Ductile Iron	130	0.0	0.00	0.0000
30003	6	J-69	J-70	12	Ductile Iron	130	0.0	0.00	0.0000
30004	115	J-526	J-462	8	Ductile Iron	130	0.0	0.00	0.0000
30005	310	J-583	J-526	16	Ductile Iron	130	0.0	-63.00	0.1000
30006	273	J-537	J-205	16	Ductile Iron	130	0.0	-66.00	0.1100
30007	9	J-195	J-196	6	Ductile Iron	130	0.0	-6.00	0.0600
30009	45	J-409	J-410	6	Ductile Iron	130	0.0	0.00	0.0000
30010	683	J-205	J-643	16	Ductile Iron	130	0.0	-72.00	0.1100
30011	647	J-643	J-22	16	Ductile Iron	130	0.0	-95.00	0.1500
30012	3	J-22	J-23	12	Ductile Iron	130	0.0	1.00	0.0000
30015	640	J-22	J-638	16	Ductile Iron	130	0.0	-96.00	0.1500
30017	3	J-20	J-21	8	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30021	617	J-635	J-484	16	Ductile Iron	130	0.0	-97.00	0.1500
30023	21	J-292	J-293	6	Ductile Iron	130	0.0	0.00	0.0000
30389	117	J-524	J-531	12	Ductile Iron	130	0.0	28.00	0.0800
30390	19	J-252	J-253	6	Ductile Iron	130	0.0	0.00	0.0000
30392	88	J-499	J-278	6	Ductile Iron	130	0.0	0.00	0.0000
30393	435	J-599	J-607	16	Ductile Iron	130	0.0	-28.00	0.0500
30394	14	J-259	J-260	6	Ductile Iron	130	0.0	0.00	0.0000
30395	8	J-173	J-174	6	Ductile Iron	130	0.0	0.00	0.0000
30397	358	J-598	J-509	16	Ductile Iron	130	0.0	-28.00	0.0500
30398	98	J-509	J-510	6	Ductile Iron	130	0.0	0.00	0.0000
30399	398	J-509	J-346	16	Ductile Iron	130	0.0	-28.00	0.0500
30400	105	J-346	J-518	16	Ductile Iron	130	0.0	-56.00	0.0900
30401	102	J-513	J-514	6	Ductile Iron	130	0.0	0.00	0.0000
40954	162	J-407	J-552	8	Ductile Iron	130	0.0	1.00	0.0100
40955	166	J-511	J-412	8	Ductile Iron	130	0.0	-1.00	0.0100
40956	54	J-407	J-408	6	Ductile Iron	130	0.0	0.00	0.0000
40957	6	J-117	J-118	6	Ductile Iron	130	0.0	0.00	0.0000
40958	19	J-286	J-287	6	Ductile Iron	130	0.0	0.00	0.0000
44165	278	J-79	J-28	6	Ductile Iron	130	0.0	14.00	0.1600
44167	5	J-79	J-80	6	Ductile Iron	130	0.0	0.00	0.0000
44168	5	J-75	J-76	6	Ductile Iron	130	0.0	0.00	0.0000
44169	8	J-35	J-170	6	Ductile Iron	130	0.0	0.00	0.0000
45230	35	J-190	J-223	12	Ductile Iron	130	0.0	-2.00	0.0100
45231	13	J-106	J-107	1	Ductile Iron	130	0.0	0.00	0.0000
45232	8	J-67	J-68	6	Ductile Iron	130	0.0	0.00	0.0000
45234	8	J-69	J-70	6	Ductile Iron	130	0.0	0.00	0.0000
45236	22	J-165	J-166	12	Ductile Iron	130	0.0	-2.00	0.0100
45237	293	J-166	J-363	12	Ductile Iron	130	0.0	-2.00	0.0100
45238	10	J-81	J-82	6	Ductile Iron	130	0.0	0.00	0.0000
45239	8	J-73	J-74	6	Ductile Iron	130	0.0	0.00	0.0000
45241	22	J-168	J-169	12	Ductile Iron	130	0.0	-2.00	0.0100
45242	148	J-169	J-296	12	Ductile Iron	130	0.0	-2.00	0.0100
45245	10	J-77	J-78	6	Ductile Iron	130	0.0	0.00	0.0000
45247	89	J-301	J-302	6	Ductile Iron	130	0.0	0.00	0.0000
45248	106	J-321	J-246	8	Ductile Iron	130	0.0	24.00	0.1500
45249	8	J-71	J-72	6	Ductile Iron	130	0.0	0.00	0.0000
45251	13	J-101	J-102	1	Ductile Iron	130	0.0	0.00	0.0000
45252	85	J-297	J-163	12	Ductile Iron	130	0.0	-27.00	0.0800
45253	22	J-163	J-164	12	Ductile Iron	130	0.0	-27.00	0.0800
45257	8	J-63	J-64	6	Ductile Iron	130	0.0	0.00	0.0000
45260	5	J-21	J-22	1	Ductile Iron	130	0.0	0.00	0.0000
45261	107	J-324	J-602	8	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
45262	8	J-65	J-66	6	Ductile Iron	130	0.0	0.00	0.0000
45263	277	J-65	J-167	12	Ductile Iron	130	0.0	-27.00	0.0800
45264	22	J-167	J-579	12	Ductile Iron	130	0.0	-27.00	0.0800
45268	9	J-183	J-184	6	Ductile Iron	130	0.0	0.00	0.0000
45271	5	J-73	J-74	1	Ductile Iron	130	0.0	0.00	0.0000
45410	41	J-377	J-378	6	Ductile Iron	130	0.0	0.00	0.0000
45970	15	J-264	J-265	6	Ductile Iron	130	0.0	0.00	0.0000
45972	7	J-136	J-137	6	Ductile Iron	130	0.0	0.00	0.0000
45973	37	J-365	J-366	6	Ductile Iron	130	0.0	0.00	0.0000
45975	38	J-373	J-374	6	Ductile Iron	130	0.0	0.00	0.0000
45998	55	J-61	J-266	8	Ductile Iron	130	0.0	0.00	0.0000
45999	7	J-61	J-62	8	Ductile Iron	130	0.0	0.00	0.0000
47269	114	J-512	J-227	8	Ductile Iron	130	0.0	24.00	0.1500
47271	9	J-144	J-145	6	Ductile Iron	130	0.0	0.00	0.0000
47272	140	J-144	J-181	8	Ductile Iron	130	0.0	24.00	0.1500
47273	9	J-181	J-182	8	Ductile Iron	130	0.0	0.00	0.0000
47274	60	J-181	J-460	8	Ductile Iron	130	0.0	0.00	0.0000
47275	37	J-371	J-372	6	Ductile Iron	130	0.0	0.00	0.0000
47276	93	J-371	J-500	8	Ductile Iron	130	0.0	0.00	0.0000
47278	41	J-389	J-390	8	Ductile Iron	130	0.0	0.00	0.0000
47279	672	J-389	J-547	8	Ductile Iron	130	0.0	20.00	0.1300
47305	50	J-355	J-430	8	Ductile Iron	130	0.0	0.00	0.0000
47310	52	J-435	J-40	8	Ductile Iron	130	0.0	0.00	0.0000
47311	4	J-40	J-41	6	Ductile Iron	130	0.0	0.00	0.0000
47325	96	J-398	J-504	8	Ductile Iron	130	0.0	0.00	0.0000
47327	42	J-398	J-399	6	Ductile Iron	130	0.0	0.00	0.0000
48023	23	J-177	J-178	6	Ductile Iron	130	0.0	0.00	0.0000
48024	140	J-343	J-150	8	Ductile Iron	130	0.0	0.00	0.0000
48025	20	J-150	J-151	8	Ductile Iron	130	0.0	0.00	0.0000
48027	2	J-9	J-10	8	Ductile Iron	130	0.0	0.00	0.0000
48028	16	J-125	J-126	6	Ductile Iron	130	0.0	0.00	0.0000
48211	7	J-138	J-139	6	Ductile Iron	130	0.0	0.00	0.0000
48212	7	J-140	J-141	6	Ductile Iron	130	0.0	0.00	0.0000
48213	20	J-305	J-306	6	Ductile Iron	130	0.0	0.00	0.0000
55557	98	J-276	J-277	12	Ductile Iron	130	0.0	1.00	0.0000
55562	20	J-152	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
55563	19	J-142	J-143	6	Ductile Iron	130	0.0	0.00	0.0000
55564	50	J-260	J-194	8	Ductile Iron	130	0.0	0.00	0.0000
55565	18	J-137	J-138	8	Ductile Iron	130	0.0	0.00	0.0000
55569	26	J-204	J-132	8	Ductile Iron	130	0.0	0.00	0.0000
55570	17	J-131	J-132	8	Ductile Iron	130	0.0	0.00	0.0000
55571	28	J-209	J-210	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
55572	26	J-202	J-203	8	Ductile Iron	130	0.0	0.00	0.0000
55574	55	J-597	J-268	8	Ductile Iron	130	0.0	0.00	0.0000
55575	26	J-195	J-196	8	Ductile Iron	130	0.0	0.00	0.0000
55577	9	J-55	J-56	6	Ductile Iron	130	0.0	0.00	0.0000
55578	8	J-49	J-50	6	Ductile Iron	130	0.0	0.00	0.0000
55979	260	J-448	J-450	12	Ductile Iron	130	0.0	-1.00	0.0000
55980	56	J-450	J-451	8	Ductile Iron	130	0.0	0.00	0.0000
55981	56	J-448	J-449	8	Ductile Iron	130	0.0	0.00	0.0000
55982	8	J-134	J-135	6	Ductile Iron	130	0.0	0.00	0.0000
55983	258	J-543	J-453	12	Ductile Iron	130	0.0	-1.00	0.0000
55984	58	J-453	J-454	8	Ductile Iron	130	0.0	0.00	0.0000
55985	10	J-160	J-161	99	Ductile Iron	130	0.0	0.00	0.0000
55986	196	J-146	J-557	12	Ductile Iron	130	0.0	-1.00	0.0000
55987	9	J-146	J-147	6	Ductile Iron	130	0.0	0.00	0.0000
55988	63	J-469	J-470	8	Ductile Iron	130	0.0	0.00	0.0000
55989	352	J-597	J-315	12	Ductile Iron	130	0.0	1.00	0.0000
55990	63	J-315	J-466	8	Ductile Iron	130	0.0	0.00	0.0000
55991	10	J-150	J-151	6	Ductile Iron	130	0.0	0.00	0.0000
55992	69	J-276	J-375	12	Ductile Iron	130	0.0	0.00	0.0000
55993	16	J-276	J-277	16	Ductile Iron	130	0.0	2.00	0.0000
55994	510	J-276	J-623	16	Ductile Iron	130	0.0	-2.00	0.0000
56000	304	J-239	J-272	16	Ductile Iron	130	0.0	-2.00	0.0000
56001	67	J-272	J-232	12	Ductile Iron	130	0.0	0.00	0.0000
56003	332	J-235	J-255	16	Ductile Iron	130	0.0	-2.00	0.0000
56010	9	J-51	J-52	6	Ductile Iron	130	0.0	0.00	0.0000
56014	9	J-53	J-54	6	Ductile Iron	130	0.0	0.00	0.0000
56016	30	J-212	J-213	8	Ductile Iron	130	0.0	0.00	0.0000
56018	32	J-214	J-215	8	Ductile Iron	130	0.0	0.00	0.0000
56021	6	J-13	J-14	6	Ductile Iron	130	0.0	0.00	0.0000
56023	8	J-43	J-44	6	Ductile Iron	130	0.0	0.00	0.0000
56024	23	J-171	J-172	8	Ductile Iron	130	0.0	0.00	0.0000
56025	21	J-157	J-154	8	Ductile Iron	130	0.0	0.00	0.0000
56028	8	J-47	J-48	6	Ductile Iron	130	0.0	0.00	0.0000
60881	220	J-498	J-562	8	Ductile Iron	130	0.0	1.00	0.0100
60885	31	J-340	J-341	6	Ductile Iron	130	0.0	0.00	0.0000
64961	16	J-271	J-272	6	Ductile Iron	130	0.0	0.00	0.0000
64963	6	J-123	J-124	99	Ductile Iron	130	0.0	-169.00	0.0100
64964	32	J-347	J-348	6	Ductile Iron	130	0.0	-1.00	0.0100
75508	481	J-262	J-613	6	Ductile Iron	130	0.0	1.00	0.0100
76924	6	J-125	J-126	6	Ductile Iron	130	0.0	0.00	0.0000
76925	34	J-356	J-357	6	Ductile Iron	130	0.0	2.00	0.0200
89634	50	J-431	J-432	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
89638	55	J-298	J-444	16	Ductile Iron	130	0.0	2.00	0.0000
89640	53	J-442	J-443	6	Ductile Iron	130	0.0	-5.00	0.0500
89641	13	J-242	J-243	6	Ductile Iron	130	0.0	0.00	0.0000
89642	14	J-256	J-240	6	Ductile Iron	130	0.0	0.00	0.0000
89643	14	J-254	J-255	6	Ductile Iron	130	0.0	0.00	0.0000
89644	32	J-349	J-350	16	Ductile Iron	130	0.0	-2.00	0.0000
89646	9	J-187	J-188	16	Ductile Iron	130	0.0	3.00	0.0100
90048	53	J-438	J-439	10	Ductile Iron	130	0.0	0.00	0.0000
96761	14	J-185	J-257	10	Ductile Iron	130	0.0	0.00	0.0000
96762	9	J-185	J-186	10	Ductile Iron	130	0.0	0.00	0.0000
98803	117	J-532	J-485	12	Ductile Iron	130	0.0	0.00	0.0000
98804	1,475	J-532	J-667	12	Ductile Iron	130	0.0	0.00	0.0000
98805	315	J-667	J-366	12	Ductile Iron	130	0.0	0.00	0.0000
98806	944	J-366	J-627	12	Ductile Iron	130	0.0	0.00	0.0000
98807	584	J-627	J-628	12	Ductile Iron	130	0.0	0.00	0.0000
99201	13	J-186	J-239	12	Ductile Iron	130	0.0	0.00	0.0000
99202	504	J-620	J-236	24	Ductile Iron	130	0.0	0.00	0.0000
99203	26	J-239	J-236	12	Ductile Iron	130	0.0	0.00	0.0000
99204	21	J-156	J-620	12	Ductile Iron	130	0.0	0.00	0.0000
99205	19	J-235	J-236	1	Ductile Iron	130	0.0	0.00	0.0000
105743	8	J-132	J-133	6	Ductile Iron	130	0.0	0.00	0.0000
105756	9	J-142	J-143	6	Ductile Iron	130	0.0	0.00	0.0000
105757	21	J-64	J-307	12	Ductile Iron	130	0.0	0.00	0.0000
105758	123	J-307	J-537	12	Ductile Iron	130	0.0	0.00	0.0000
105759	17	J-280	J-63	12	Ductile Iron	130	0.0	0.00	0.0000
105760	5	J-63	J-64	12	Ductile Iron	130	0.0	0.00	0.0000
105761	19	J-290	J-291	8	Ductile Iron	130	0.0	-8.00	0.0500
105762	61	J-462	J-463	8	Ductile Iron	130	0.0	0.00	0.0000
105763	198	J-463	J-535	8	Ductile Iron	130	0.0	0.00	0.0000
105765	120	J-535	J-164	8	Ductile Iron	130	0.0	0.00	0.0000
105766	8	J-164	J-165	6	Ductile Iron	130	0.0	0.00	0.0000
105767	349	J-164	J-596	8	Ductile Iron	130	0.0	0.00	0.0000
141981	27	J-330	J-290	8	Ductile Iron	130	0.0	-8.00	0.0500
141982	121	J-330	J-536	8	Ductile Iron	130	0.0	8.00	0.0500
141984	44	J-403	J-404	6	Ductile Iron	130	0.0	0.00	0.0000
141985	6	J-97	J-98	6	Ductile Iron	130	0.0	5.00	0.0600
141986	6	J-95	J-96	6	Ductile Iron	130	0.0	0.00	0.0000
141987	138	J-472	J-99	8	Ductile Iron	130	0.0	1.00	0.0000
141988	11	J-217	J-218	6	Ductile Iron	130	0.0	1.00	0.0100
141989	6	J-99	J-100	6	Ductile Iron	130	0.0	0.00	0.0000
141990	227	J-498	J-467	6	Ductile Iron	130	0.0	0.00	0.0000
141991	63	J-467	J-468	6	Ductile Iron	130	0.0	-1.00	0.0100

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
141994	5	J-83	J-84	6	Ductile Iron	130	0.0	0.00	0.0000
141995	6	J-101	J-102	6	Ductile Iron	130	0.0	0.00	0.0000
144879	5	J-67	J-68	16	Ductile Iron	130	0.0	0.00	0.0000
158638	6	J-33	J-34	6	Ductile Iron	130	0.0	0.00	0.0000
158639	43	J-244	J-245	6	Ductile Iron	130	0.0	0.00	0.0000
158640	35	J-224	J-225	8	Ductile Iron	130	0.0	0.00	0.0000
158649	26	J-193	J-194	8	Ductile Iron	130	0.0	0.00	0.0000
158650	65	J-140	J-193	8	Ductile Iron	130	0.0	0.00	0.0000
158651	18	J-139	J-140	8	Ductile Iron	130	0.0	0.00	0.0000
158652	20	J-154	J-155	8	Ductile Iron	130	0.0	0.00	0.0000
158653	25	J-191	J-192	6	Ductile Iron	130	0.0	0.00	0.0000
158654	148	J-155	J-200	8	Ductile Iron	130	0.0	0.00	0.0000
158655	26	J-200	J-201	8	Ductile Iron	130	0.0	0.00	0.0000
159024	35	J-226	J-227	8	Ductile Iron	130	0.0	0.00	0.0000
159026	11	J-85	J-86	6	Ductile Iron	130	0.0	0.00	0.0000
174392	80	J-491	J-492	8	Ductile Iron	130	0.0	0.00	0.0000
174802	41	J-395	J-396	4	Ductile Iron	130	0.0	0.00	0.0000
174803	27	J-155	J-327	4	Ductile Iron	130	0.0	0.00	0.0000
189468	7	J-148	J-149	6	Ductile Iron	130	0.0	0.00	0.0000
189469	131	J-279	J-130	8	Ductile Iron	130	0.0	0.00	0.0000
189470	6	J-130	J-131	8	Ductile Iron	130	0.0	0.00	0.0000
189472	197	J-559	J-437	8	Ductile Iron	130	0.0	-1.00	0.0100
189473	16	J-273	J-274	6	Ductile Iron	130	0.0	0.00	0.0000
189474	53	J-437	J-361	8	Ductile Iron	130	0.0	-1.00	0.0100
189475	36	J-361	J-362	8	Ductile Iron	130	0.0	-1.00	0.0100
189476	197	J-362	J-558	8	Ductile Iron	130	0.0	-3.00	0.0200
189477	6	J-91	J-92	4	Ductile Iron	130	0.0	0.00	0.0000
198398	147	J-417	J-286	8	Ductile Iron	130	0.0	1.00	0.0000
203870	6	J-2	J-19	16	Ductile Iron	130	0.0	-2.00	0.0000
203871	1	J-1	J-2	8	Ductile Iron	130	0.0	0.00	0.0000
213052	70	J-475	J-219	8	Ductile Iron	130	0.0	2.00	0.0200
213053	11	J-219	J-220	6	Ductile Iron	130	0.0	0.00	0.0000
213054	388	J-219	J-418	8	Ductile Iron	130	0.0	2.00	0.0100
213055	47	J-418	J-419	6	Ductile Iron	130	0.0	0.00	0.0000
225318	10	J-196	J-205	6	Ductile Iron	130	0.0	-6.00	0.0600
228582	4	J-34	J-35	6	Ductile Iron	130	0.0	3.00	0.0300
228583	329	J-594	J-34	6	Ductile Iron	130	0.0	3.00	0.0300
229343	12	J-12	J-234	8	Ductile Iron	130	0.0	8.00	0.0500
229344	4	J-28	J-29	6	Ductile Iron	130	0.0	14.00	0.1600
229345	6	J-29	J-10	6	Ductile Iron	130	0.0	14.00	0.1600
229346	2	J-10	J-11	8	Ductile Iron	130	0.0	8.00	0.0500
229347	2	J-11	J-12	8	Ductile Iron	130	0.0	8.00	0.0500

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
239091	40	J-232	J-233	12	Ductile Iron	130	0.0	0.00	0.0000
239094	15	J-243	J-263	6	Ductile Iron	130	0.0	0.00	0.0000
239098	13	J-240	J-241	6	Ductile Iron	130	0.0	0.00	0.0000
239099	20	J-255	J-299	6	Ductile Iron	130	0.0	0.00	0.0000
239483	168	J-552	J-117	8	Ductile Iron	130	0.0	1.00	0.0100
239484	116	J-471	J-511	8	Ductile Iron	130	0.0	-1.00	0.0100
239485	44	J-405	J-406	8	Ductile Iron	130	0.0	1.00	0.0100
239486	312	J-587	J-591	6	Ductile Iron	130	0.0	5.00	0.0600
239487	158	J-536	J-404	8	Ductile Iron	130	0.0	8.00	0.0500
239883	11	J-221	J-222	6	Ductile Iron	130	0.0	11.00	0.1200
239884	557	J-573	J-617	8	Ductile Iron	130	0.0	-15.00	0.1000
239886	455	J-610	J-394	8	Ductile Iron	130	0.0	-16.00	0.1000
239888	37	J-363	J-364	12	Ductile Iron	130	0.0	-31.00	0.0900
240694	84	J-406	J-407	8	Ductile Iron	130	0.0	1.00	0.0100
240695	46	J-117	J-417	8	Ductile Iron	130	0.0	1.00	0.0000
240696	69	J-286	J-471	8	Ductile Iron	130	0.0	-1.00	0.0100
240697	441	J-483	J-107	6	Ductile Iron	130	0.0	-1.00	0.0100
240699	507	J-621	J-622	6	Ductile Iron	130	0.0	-7.00	0.0800
240700	70	J-472	J-473	8	Ductile Iron	130	0.0	2.00	0.0100
240701	101	J-99	J-217	8	Ductile Iron	130	0.0	1.00	0.0000
240702	199	J-526	J-475	16	Ductile Iron	130	0.0	-63.00	0.1000
240703	164	J-475	J-537	16	Ductile Iron	130	0.0	-66.00	0.1100
241094	155	J-547	J-477	8	Ductile Iron	130	0.0	14.00	0.0900
241095	254	J-572	J-79	6	Ductile Iron	130	0.0	17.00	0.2000
241097	229	J-565	J-106	6	Ductile Iron	130	0.0	5.00	0.0600
241098	453	J-167	J-609	6	Ductile Iron	130	0.0	1.00	0.0100
241100	206	J-359	J-560	6	Ductile Iron	130	0.0	1.00	0.0100
241101	204	J-560	J-204	6	Ductile Iron	130	0.0	0.00	0.0000
241104	61	J-461	J-371	8	Ductile Iron	130	0.0	0.00	0.0000
241105	54	J-371	J-436	8	Ductile Iron	130	0.0	0.00	0.0000
241106	102	J-181	J-461	8	Ductile Iron	130	0.0	24.00	0.1500
241109	49	J-227	J-144	8	Ductile Iron	130	0.0	24.00	0.1500
241111	44	J-246	J-247	8	Ductile Iron	130	0.0	24.00	0.1500
241115	849	J-52	J-88	6	Ductile Iron	130	0.0	2.00	0.0300
241117	572	J-632	J-633	6	Ductile Iron	130	0.0	4.00	0.0500
241118	579	J-632	J-213	6	Ductile Iron	130	0.0	-8.00	0.0900
241121	22	J-314	J-315	8	Ductile Iron	130	0.0	0.00	0.0000
241122	226	J-557	J-469	12	Ductile Iron	130	0.0	-1.00	0.0000
241123	116	J-453	J-146	12	Ductile Iron	130	0.0	-1.00	0.0000
241127	443	J-444	J-608	16	Ductile Iron	130	0.0	2.00	0.0000
241128	303	J-78	J-442	6	Ductile Iron	130	0.0	-5.00	0.0500
241131	268	J-193	J-580	16	Ductile Iron	130	0.0	-2.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
241136	592	J-585	J-27	6	Ductile Iron	130	0.0	0.00	0.0000
241137	269	J-446	J-385	16	Ductile Iron	130	0.0	-3.00	0.0100
241139	125	J-533	J-534	6	Ductile Iron	130	0.0	1.00	0.0100
241142	45	J-400	J-416	16	Ductile Iron	130	0.0	-20.00	0.0300
241145	265	J-519	J-333	16	Ductile Iron	130	0.0	-45.00	0.0700
241146	323	J-370	J-397	16	Ductile Iron	130	0.0	-49.00	0.0800
241147	42	J-397	J-285	16	Ductile Iron	130	0.0	-49.00	0.0800
241148	465	J-285	J-439	16	Ductile Iron	130	0.0	-65.00	0.1000
241494	292	J-432	J-546	16	Ductile Iron	130	0.0	-65.00	0.1000
241495	150	J-546	J-323	16	Ductile Iron	130	0.0	-65.00	0.1000
241496	69	J-323	J-1	16	Ductile Iron	130	0.0	-65.00	0.1000
241497	32	J-1	J-346	16	Ductile Iron	130	0.0	-65.00	0.1000
241498	99	J-346	J-414	16	Ductile Iron	130	0.0	-38.00	0.0600
241499	45	J-414	J-415	16	Ductile Iron	130	0.0	-38.00	0.0600
241500	94	J-501	J-502	6	Ductile Iron	130	0.0	-5.00	0.0500
241502	487	J-501	J-614	6	Ductile Iron	130	0.0	5.00	0.0600
242703	326	J-592	J-593	6	Ductile Iron	130	0.0	-3.00	0.0300
243096	18	J-281	J-16	16	Ductile Iron	130	0.0	1.00	0.0000
243097	33	J-355	J-281	16	Ductile Iron	130	0.0	-12.00	0.0200
243100	127	J-504	J-233	16	Ductile Iron	130	0.0	7.00	0.0100
243101	392	J-506	J-562	16	Ductile Iron	130	0.0	13.00	0.0200
243898	52	J-434	J-38	8	Ductile Iron	130	0.0	0.00	0.0000
243899	4	J-38	J-39	6	Ductile Iron	130	0.0	0.00	0.0000
243900	60	J-457	J-42	8	Ductile Iron	130	0.0	0.00	0.0000
243901	4	J-42	J-43	6	Ductile Iron	130	0.0	0.00	0.0000
247576	10	J-13	J-214	6	Ductile Iron	130	0.0	-4.00	0.0500
247577	2	J-13	J-14	6	Ductile Iron	130	0.0	0.00	0.0000
247937	3	J-14	J-19	6	Ductile Iron	130	0.0	0.00	0.0000
P-1	205	J-643	J-380	6	Ductile Iron	130	0.0	23.00	0.2600
P-2	520	J-380	J-381	6	Ductile Iron	130	0.0	10.00	0.1100
P-3	283	J-381	J-382	6	Ductile Iron	130	0.0	7.00	0.0800
P-4	531	J-382	J-383	6	Ductile Iron	130	0.0	7.00	0.0700
P-5	423	J-383	J-384	6	Ductile Iron	130	0.0	-7.00	0.0800
P-6	283	J-384	J-385	6	Ductile Iron	130	0.0	-9.00	0.1000
P-7	434	J-385	J-380	6	Ductile Iron	130	0.0	-11.00	0.1200
P-8	679	J-647	J-386	6	Ductile Iron	130	0.0	-6.00	0.0600
P-9	302	J-386	J-656	6	Ductile Iron	130	0.0	3.00	0.0400
P-10	155	J-383	J-386	6	Ductile Iron	130	0.0	11.00	0.1200
P-11	501	J-593	J-387	6	Ductile Iron	130	0.0	-3.00	0.0300
P-12	462	J-387	J-441	6	Ductile Iron	130	0.0	-4.00	0.0500
P-13	472	J-658	J-388	6	Ductile Iron	130	0.0	-4.00	0.0400
P-14	515	J-388	J-588	6	Ductile Iron	130	0.0	-7.00	0.0800

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-15	655	J-363	J-389	6	Ductile Iron	130	0.0	15.00	0.1700
P-16	635	J-389	J-588	6	Ductile Iron	130	0.0	13.00	0.1400
P-17	414	J-588	J-391	6	Ductile Iron	130	0.0	0.00	0.0000
P-19	630	J-664	J-392	6	Ductile Iron	130	0.0	16.00	0.1800
P-20	660	J-392	J-665	6	Ductile Iron	130	0.0	13.00	0.1500
P-22	632	J-394	J-384	6	Ductile Iron	130	0.0	-17.00	0.1900
P-25	931	J-222	J-397	6	Ductile Iron	130	0.0	3.00	0.0300
P-26	265	J-397	J-621	6	Ductile Iron	130	0.0	-2.00	0.0300
P-28	540	J-398	J-232	6	Ductile Iron	130	0.0	-16.00	0.1800
P-31	31	R-2	PMP-2	99	Ductile Iron	130	0.0	51.00	0.0000
P-32	42	PMP-2	J-116	99	Ductile Iron	130	0.0	51.00	0.0000
P-34	72	R-3	PMP-3	99	Ductile Iron	130	0.0	0.00	0.0000
P-35	80	PMP-3	J-161	99	Ductile Iron	130	0.0	0.00	0.0000
P-36	26	R-1	PMP-1	99	Ductile Iron	130	0.0	169.00	0.0100
P-37	25	PMP-1	J-124	99	Ductile Iron	130	0.0	169.00	0.0100
P-38	45	J-350	J-401	16	Ductile Iron	130	0.0	-2.00	0.0000
P-39	18	J-401	J-188	16	Ductile Iron	130	0.0	-3.00	0.0100
P-41	336	J-401	J-673	6	Ductile Iron	130	0.0	1.00	0.0100
P-44	1	J-321	J-365	12	Ductile Iron	130	0.0	-20.00	0.0600
P-47	379	J-237	J-235	16	Ductile Iron	130	0.0	-2.00	0.0000
P-49	182	J-250	J-237	16	Ductile Iron	130	0.0	-2.00	0.0000
P-50	242	J-272	J-229	16	Ductile Iron	130	0.0	-2.00	0.0000
P-51	133	J-229	J-250	16	Ductile Iron	130	0.0	-2.00	0.0000
P-53	186	J-242	J-239	16	Ductile Iron	130	0.0	-2.00	0.0000
P-54	200	J-623	J-129	16	Ductile Iron	130	0.0	-2.00	0.0000
P-55	115	J-129	J-242	16	Ductile Iron	130	0.0	-2.00	0.0000
P-56	138	J-15	J-332	16	Ductile Iron	130	0.0	2.00	0.0000
P-58	5	J-332	J-284	16	Ductile Iron	130	0.0	2.00	0.0000
P-59	290	J-284	J-17	16	Ductile Iron	130	0.0	2.00	0.0000
P-62	5	J-287	J-336	16	Ductile Iron	130	0.0	-2.00	0.0000
P-63	658	J-336	J-2	16	Ductile Iron	130	0.0	-2.00	0.0000
P-65	11	J-365	J-370	16	Ductile Iron	130	0.0	-49.00	0.0800
P-74	54	J-326	J-430	6	Ductile Iron	130	0.0	1.00	0.0100
P-75	644	J-430	J-367	6	Ductile Iron	130	0.0	1.00	0.0100
P-78	4	J-15	J-94	16	Ductile Iron	130	0.0	0.00	0.0000
P-85	17	J-378	J-325	12	Ductile Iron	130	0.0	-27.00	0.0800
P-87	1	J-321	J-365	8	Ductile Iron	130	0.0	-7.00	0.0400
P-90	70	J-296	J-322	12	Ductile Iron	130	0.0	-2.00	0.0100
P-92	187	J-164	J-293	12	Ductile Iron	130	0.0	-27.00	0.0800
P-93	49	J-293	J-378	12	Ductile Iron	130	0.0	-27.00	0.0800
P-96	512	J-626	J-321	30	Ductile Iron	130	0.0	84.00	0.0400
P-97	39	J-321	J-67	30	Ductile Iron	130	0.0	97.00	0.0400

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-98	18	J-484	J-292	16	Ductile Iron	130	0.0	-97.00	0.1500
P-99	62	J-292	J-382	16	Ductile Iron	130	0.0	-97.00	0.1500
P-102	583	J-391	J-665	6	Ductile Iron	130	0.0	-4.00	0.0400
P-103	326	J-665	J-657	6	Ductile Iron	130	0.0	6.00	0.0700
P-106	503	J-447	J-630	6	Ductile Iron	130	0.0	4.00	0.0400
P-107	30	J-630	J-625	6	Ductile Iron	130	0.0	0.00	0.0000
P-108	12	J-185	J-628	8	Ductile Iron	130	0.0	0.00	0.0000
P-109	3	J-628	J-266	8	Ductile Iron	130	0.0	0.00	0.0000
P-110	11	J-605	J-138	8	Ductile Iron	130	0.0	-3.00	0.0200
P-111	409	J-138	J-606	8	Ductile Iron	130	0.0	-3.00	0.0200
P-112	641	J-65	J-590	6	Ductile Iron	130	0.0	8.00	0.0900
P-113	297	J-590	J-52	6	Ductile Iron	130	0.0	5.00	0.0600
P-115	24	J-372	J-312	8	Ductile Iron	130	0.0	0.00	0.0000
P-117	6	J-343	J-340	8	Ductile Iron	130	0.0	0.00	0.0000
P-121	46	J-291	J-583	16	Ductile Iron	130	0.0	-63.00	0.1000
P-123	26	J-568	J-581	16	Ductile Iron	130	0.0	14.00	0.0200
P-124	206	J-638	J-578	16	Ductile Iron	130	0.0	-96.00	0.1500
P-125	433	J-578	J-20	16	Ductile Iron	130	0.0	-97.00	0.1500
P-126	56	J-476	J-572	6	Ductile Iron	130	0.0	3.00	0.0400
P-127	14	J-572	J-477	6	Ductile Iron	130	0.0	-14.00	0.1600
P-128	5	J-322	J-355	12	Ductile Iron	130	0.0	-2.00	0.0100
P-130	237	J-416	J-391	16	Ductile Iron	130	0.0	-20.00	0.0300
P-131	10	J-391	J-571	16	Ductile Iron	130	0.0	-20.00	0.0300
P-133	45	J-324	J-65	12	Ductile Iron	130	0.0	-27.00	0.0800
P-134	561	J-562	J-6	16	Ductile Iron	130	0.0	14.00	0.0200
P-135	4	J-6	J-568	16	Ductile Iron	130	0.0	14.00	0.0200
P-146	662	J-616	J-37	6	Ductile Iron	130	0.0	-5.00	0.0600
P-147	104	J-37	J-651	6	Ductile Iron	130	0.0	-7.00	0.0800
P-148	17	J-393	J-339	8	Ductile Iron	130	0.0	16.00	0.1000
P-149	24	J-339	J-394	8	Ductile Iron	130	0.0	16.00	0.1000
P-150	73	J-633	J-190	6	Ductile Iron	130	0.0	3.00	0.0300
P-151	617	J-190	J-648	6	Ductile Iron	130	0.0	1.00	0.0200
P-152	52	J-32	J-195	6	Ductile Iron	130	0.0	-6.00	0.0600
P-154	92	J-205	J-409	8	Ductile Iron	130	0.0	0.00	0.0000
P-155	23	J-409	J-528	8	Ductile Iron	130	0.0	0.00	0.0000
P-156	720	J-649	J-143	12	Ductile Iron	130	0.0	0.00	0.0000
P-157	2	J-143	J-280	12	Ductile Iron	130	0.0	0.00	0.0000
P-158	545	J-629	J-306	6	Ductile Iron	130	0.0	-2.00	0.0200
P-159	18	J-306	J-630	6	Ductile Iron	130	0.0	-2.00	0.0200
P-163	287	J-395	J-661	30	Ductile Iron	130	0.0	84.00	0.0400
P-164	82	J-619	J-254	16	Ductile Iron	130	0.0	-2.00	0.0000
P-165	465	J-254	J-349	16	Ductile Iron	130	0.0	-2.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-166	207	J-617	J-216	8	Ductile Iron	130	0.0	-16.00	0.1000
P-167	293	J-216	J-618	8	Ductile Iron	130	0.0	-16.00	0.1000
P-170	6	J-291	J-21	12	Ductile Iron	130	0.0	-27.00	0.0800
P-171	61	J-21	J-324	12	Ductile Iron	130	0.0	-27.00	0.0800
P-172	281	J-524	J-252	16	Ductile Iron	130	0.0	-28.00	0.0500
P-173	90	J-252	J-599	16	Ductile Iron	130	0.0	-28.00	0.0500
P-175	137	J-173	J-598	16	Ductile Iron	130	0.0	-28.00	0.0500
P-176	44	J-597	J-49	12	Ductile Iron	130	0.0	0.00	0.0000
P-180	264	J-132	J-195	12	Ductile Iron	130	0.0	0.00	0.0000
P-181	72	J-195	J-597	12	Ductile Iron	130	0.0	0.00	0.0000
P-184	177	J-10	J-75	6	Ductile Iron	130	0.0	6.00	0.0700
P-185	159	J-75	J-594	6	Ductile Iron	130	0.0	3.00	0.0300
P-186	47	J-334	J-377	6	Ductile Iron	130	0.0	4.00	0.0400
P-187	8	J-377	J-447	6	Ductile Iron	130	0.0	4.00	0.0400
P-188	16	J-422	J-85	6	Ductile Iron	130	0.0	13.00	0.1500
P-189	733	J-85	J-65	6	Ductile Iron	130	0.0	11.00	0.1200
P-192	208	J-277	J-212	12	Ductile Iron	130	0.0	0.00	0.0000
P-194	136	J-172	J-177	8	Ductile Iron	130	0.0	0.00	0.0000
P-195	25	J-177	J-343	8	Ductile Iron	130	0.0	0.00	0.0000
P-198	42	J-582	J-356	8	Ductile Iron	130	0.0	24.00	0.1500
P-199	270	J-356	J-389	8	Ductile Iron	130	0.0	22.00	0.1400
P-200	111	J-579	J-491	12	Ductile Iron	130	0.0	-27.00	0.0800
P-201	157	J-491	J-487	12	Ductile Iron	130	0.0	-27.00	0.0800
P-202	434	J-129	J-198	6	Ductile Iron	130	0.0	-3.00	0.0300
P-203	19	J-198	J-561	6	Ductile Iron	130	0.0	-3.00	0.0300
P-204	99	J-606	J-141	8	Ductile Iron	130	0.0	-4.00	0.0200
P-205	334	J-141	J-547	8	Ductile Iron	130	0.0	-5.00	0.0300
P-206	433	J-608	J-443	16	Ductile Iron	130	0.0	2.00	0.0000
P-207	44	J-443	J-563	16	Ductile Iron	130	0.0	-2.00	0.0000
P-210	56	J-498	J-340	8	Ductile Iron	130	0.0	-2.00	0.0100
P-211	30	J-340	J-473	8	Ductile Iron	130	0.0	-2.00	0.0100
P-212	7	J-468	J-101	6	Ductile Iron	130	0.0	-1.00	0.0100
P-213	84	J-101	J-345	6	Ductile Iron	130	0.0	-1.00	0.0100
P-214	16	J-218	J-83	6	Ductile Iron	130	0.0	1.00	0.0100
P-215	16	J-83	J-345	6	Ductile Iron	130	0.0	1.00	0.0100
P-216	25	J-404	J-97	8	Ductile Iron	130	0.0	8.00	0.0500
P-218	32	J-97	J-95	8	Ductile Iron	130	0.0	2.00	0.0100
P-219	117	J-95	J-472	8	Ductile Iron	130	0.0	2.00	0.0100
P-220	18	J-415	J-115	16	Ductile Iron	130	0.0	-38.00	0.0600
P-221	79	J-115	J-506	16	Ductile Iron	130	0.0	13.00	0.0200
P-222	125	J-450	J-160	12	Ductile Iron	130	0.0	-1.00	0.0000
P-223	13	J-160	J-543	12	Ductile Iron	130	0.0	-1.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-224	10	J-383	J-123	8	Ductile Iron	130	0.0	-152.00	0.9700
P-225	30	J-123	J-384	8	Ductile Iron	130	0.0	17.00	0.1100
P-226	34	J-212	J-331	12	Ductile Iron	130	0.0	0.00	0.0000
P-228	176	J-331	J-214	12	Ductile Iron	130	0.0	0.00	0.0000
P-230	85	J-214	J-13	12	Ductile Iron	130	0.0	0.00	0.0000
P-231	168	J-13	J-375	12	Ductile Iron	130	0.0	0.00	0.0000
P-235	55	J-301	J-321	12	Ductile Iron	130	0.0	-2.00	0.0100
P-236	562	J-49	J-55	12	Ductile Iron	130	0.0	0.00	0.0000
P-237	37	J-55	J-277	12	Ductile Iron	130	0.0	0.00	0.0000
P-240	321	J-282	J-53	12	Ductile Iron	130	0.0	1.00	0.0000
P-241	454	J-53	J-276	12	Ductile Iron	130	0.0	1.00	0.0000
P-243	35	J-81	J-165	12	Ductile Iron	130	0.0	-2.00	0.0100
P-245	153	J-69	J-349	12	Ductile Iron	130	0.0	-2.00	0.0100
P-246	80	J-349	J-370	12	Ductile Iron	130	0.0	-2.00	0.0100
P-247	91	J-370	J-81	12	Ductile Iron	130	0.0	-2.00	0.0100
P-252	80	J-326	J-61	8	Ductile Iron	130	0.0	24.00	0.1500
P-253	27	J-61	J-512	8	Ductile Iron	130	0.0	24.00	0.1500
P-254	46	J-231	J-327	16	Ductile Iron	130	0.0	-2.00	0.0000
P-255	18	J-327	J-189	16	Ductile Iron	130	0.0	-2.00	0.0000
P-256	3	J-518	J-513	16	Ductile Iron	130	0.0	-56.00	0.0900
P-257	228	J-513	J-291	16	Ductile Iron	130	0.0	-56.00	0.0900
P-259	121	J-197	J-282	12	Ductile Iron	130	0.0	1.00	0.0000
P-261	19	J-375	J-226	8	Ductile Iron	130	0.0	0.00	0.0000
P-262	34	J-227	J-86	8	Ductile Iron	130	0.0	0.00	0.0000
P-266	22	J-478	J-295	12	Ductile Iron	130	0.0	-13.00	0.0400
P-267	6	J-295	J-297	12	Ductile Iron	130	0.0	-13.00	0.0400
P-268	60	J-201	J-191	8	Ductile Iron	130	0.0	0.00	0.0000
P-269	237	J-191	J-139	8	Ductile Iron	130	0.0	0.00	0.0000
P-277	58	J-244	J-224	8	Ductile Iron	130	0.0	0.00	0.0000
P-278	29	J-225	J-367	8	Ductile Iron	130	0.0	0.00	0.0000
P-279	23	J-367	J-262	8	Ductile Iron	130	0.0	0.00	0.0000
P-280	340	J-86	J-33	8	Ductile Iron	130	0.0	0.00	0.0000
P-281	110	J-33	J-244	8	Ductile Iron	130	0.0	0.00	0.0000
P-283	156	J-209	J-132	12	Ductile Iron	130	0.0	0.00	0.0000
P-284	140	J-367	J-202	12	Ductile Iron	130	0.0	0.00	0.0000
P-285	45	J-202	J-209	12	Ductile Iron	130	0.0	0.00	0.0000
P-286	201	J-297	J-459	12	Ductile Iron	130	0.0	-14.00	0.0400
P-288	16	J-459	J-413	12	Ductile Iron	130	0.0	-14.00	0.0400
P-289	4	J-413	J-411	12	Ductile Iron	130	0.0	-15.00	0.0400
P-290	95	J-233	J-457	16	Ductile Iron	130	0.0	-9.00	0.0100
P-291	195	J-457	J-261	16	Ductile Iron	130	0.0	-9.00	0.0100
P-292	38	J-421	J-456	16	Ductile Iron	130	0.0	-45.00	0.0700

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-293	69	J-456	J-519	16	Ductile Iron	130	0.0	-45.00	0.0700
P-294	36	J-333	J-373	16	Ductile Iron	130	0.0	-49.00	0.0800
P-295	875	J-373	J-365	16	Ductile Iron	130	0.0	-49.00	0.0800
P-300	190	J-261	J-434	16	Ductile Iron	130	0.0	-12.00	0.0200
P-301	77	J-434	J-496	16	Ductile Iron	130	0.0	-12.00	0.0200
P-302	20	J-187	J-428	16	Ductile Iron	130	0.0	-3.00	0.0100
P-303	40	J-428	J-446	16	Ductile Iron	130	0.0	-3.00	0.0100
P-304	310	J-571	J-423	16	Ductile Iron	130	0.0	-20.00	0.0300
P-309	214	J-270	J-373	12	Ductile Iron	130	0.0	0.00	0.0000
P-310	32	J-423	J-387	16	Ductile Iron	130	0.0	-20.00	0.0300
P-311	23	J-387	J-426	16	Ductile Iron	130	0.0	-20.00	0.0300
P-312	184	J-151	J-125	8	Ductile Iron	130	0.0	0.00	0.0000
P-314	65	J-157	J-171	12	Ductile Iron	130	0.0	0.00	0.0000
P-315	137	J-171	J-372	12	Ductile Iron	130	0.0	0.00	0.0000
P-316	16	J-153	J-143	12	Ductile Iron	130	0.0	0.00	0.0000
P-317	32	J-143	J-156	12	Ductile Iron	130	0.0	0.00	0.0000
P-318	100	J-353	J-101	12	Ductile Iron	130	0.0	-2.00	0.0100
P-319	149	J-101	J-301	12	Ductile Iron	130	0.0	-2.00	0.0100
P-330	274	J-272	J-181	12	Ductile Iron	130	0.0	1.00	0.0000
P-332	80	J-181	J-51	12	Ductile Iron	130	0.0	1.00	0.0000
P-333	67	J-51	J-197	12	Ductile Iron	130	0.0	1.00	0.0000
P-334	33	J-464	J-154	30	Ductile Iron	130	0.0	84.00	0.0400
P-336	10	J-154	J-152	30	Ductile Iron	130	0.0	84.00	0.0400
P-337	708	J-152	J-395	30	Ductile Iron	130	0.0	84.00	0.0400
P-338	154	J-363	J-73	12	Ductile Iron	130	0.0	-2.00	0.0100
P-339	246	J-73	J-168	12	Ductile Iron	130	0.0	-2.00	0.0100
P-340	89	J-156	J-137	12	Ductile Iron	130	0.0	0.00	0.0000
P-341	185	J-137	J-367	12	Ductile Iron	130	0.0	0.00	0.0000
P-342	51	J-365	J-71	12	Ductile Iron	130	0.0	-27.00	0.0800
P-343	145	J-71	J-297	12	Ductile Iron	130	0.0	-27.00	0.0800
P-348	5	J-223	J-106	12	Ductile Iron	130	0.0	-2.00	0.0100
P-350	10	J-106	J-67	12	Ductile Iron	130	0.0	-2.00	0.0100
P-351	263	J-67	J-69	12	Ductile Iron	130	0.0	-2.00	0.0100
P-352	15	J-277	J-282	16	Ductile Iron	130	0.0	2.00	0.0000
P-353	5	J-282	J-298	16	Ductile Iron	130	0.0	2.00	0.0000
P-354	72	J-276	J-134	12	Ductile Iron	130	0.0	0.00	0.0000
P-355	21	J-134	J-448	12	Ductile Iron	130	0.0	-1.00	0.0000
P-357	88	J-273	J-559	8	Ductile Iron	130	0.0	-1.00	0.0100
P-358	583	J-364	J-271	12	Ductile Iron	130	0.0	-31.00	0.0900
P-360	7	J-558	J-264	8	Ductile Iron	130	0.0	-5.00	0.0300
P-362	73	J-563	J-242	16	Ductile Iron	130	0.0	-2.00	0.0000
P-363	149	J-242	J-193	16	Ductile Iron	130	0.0	-2.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-364	173	J-607	J-259	16	Ductile Iron	130	0.0	-28.00	0.0500
P-365	180	J-259	J-173	16	Ductile Iron	130	0.0	-28.00	0.0500
P-366	82	J-580	J-256	16	Ductile Iron	130	0.0	-2.00	0.0000
P-367	418	J-256	J-619	16	Ductile Iron	130	0.0	-2.00	0.0000
P-368	4	J-24	J-7	16	Ductile Iron	130	0.0	-2.00	0.0000
P-369	20	J-7	J-120	16	Ductile Iron	130	0.0	-2.00	0.0000
P-370	49	J-355	J-77	12	Ductile Iron	130	0.0	-2.00	0.0100
P-371	186	J-77	J-353	12	Ductile Iron	130	0.0	-2.00	0.0100
P-372	155	J-375	J-43	12	Ductile Iron	130	0.0	0.00	0.0000
P-373	119	J-43	J-157	12	Ductile Iron	130	0.0	0.00	0.0000
P-374	56	J-325	J-63	12	Ductile Iron	130	0.0	-27.00	0.0800
P-375	392	J-63	J-291	12	Ductile Iron	130	0.0	-27.00	0.0800
P-376	22	J-402	J-200	8	Ductile Iron	130	0.0	-13.00	0.0800
P-377	1,316	J-200	J-516	8	Ductile Iron	130	0.0	-13.00	0.0800
P-378	69	J-372	J-47	12	Ductile Iron	130	0.0	0.00	0.0000
P-379	87	J-47	J-270	12	Ductile Iron	130	0.0	0.00	0.0000
P-380	207	J-487	J-183	12	Ductile Iron	130	0.0	-27.00	0.0800
P-381	301	J-183	J-489	12	Ductile Iron	130	0.0	-28.00	0.0800
P-382	731	J-213	J-180	6	Ductile Iron	130	0.0	-10.00	0.1200
P-383	19	J-180	J-427	6	Ductile Iron	130	0.0	-13.00	0.1500
P-384	19	J-315	J-150	12	Ductile Iron	130	0.0	1.00	0.0000
P-385	164	J-150	J-469	12	Ductile Iron	130	0.0	1.00	0.0000
P-386	200	J-121	J-5	16	Ductile Iron	130	0.0	-2.00	0.0000
P-387	399	J-5	J-287	16	Ductile Iron	130	0.0	-2.00	0.0000
P-388	6	J-278	J-148	8	Ductile Iron	130	0.0	0.00	0.0000
P-389	11	J-148	J-279	8	Ductile Iron	130	0.0	0.00	0.0000
P-390	52	J-131	J-91	8	Ductile Iron	130	0.0	0.00	0.0000
P-391	77	J-91	J-273	8	Ductile Iron	130	0.0	0.00	0.0000
P-392	213	J-662	J-133	12	Ductile Iron	130	0.0	0.00	0.0000
P-393	833	J-133	J-649	12	Ductile Iron	130	0.0	0.00	0.0000
P-394	146	J-461	J-125	8	Ductile Iron	130	0.0	24.00	0.1500
P-395	128	J-125	J-582	8	Ductile Iron	130	0.0	24.00	0.1500
P-396	341	J-125	J-9	8	Ductile Iron	130	0.0	0.00	0.0000
P-397	20	J-9	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
P-398	23	J-425	J-82	6	Ductile Iron	130	0.0	-5.00	0.0600
P-399	26	J-82	J-386	6	Ductile Iron	130	0.0	-5.00	0.0600
P-400	257	J-489	J-73	12	Ductile Iron	130	0.0	-28.00	0.0800
P-401	74	J-73	J-531	12	Ductile Iron	130	0.0	-28.00	0.0800
P-402	8	J-615	J-57	6	Ductile Iron	130	0.0	0.00	0.0000
P-403	489	J-57	J-616	6	Ductile Iron	130	0.0	0.00	0.0000
P-404	581	J-651	J-31	6	Ductile Iron	130	0.0	-9.00	0.1000
P-405	643	J-31	J-520	6	Ductile Iron	130	0.0	-12.00	0.1300

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-406	88	J-520	J-25	6	Ductile Iron	130	0.0	-14.00	0.1600
P-407	24	J-25	J-401	6	Ductile Iron	130	0.0	-14.00	0.1600
P-410	91	J-247	J-91	8	Ductile Iron	130	0.0	24.00	0.1500
P-411	62	J-91	J-326	8	Ductile Iron	130	0.0	24.00	0.1500
P-412	2	J-600	J-284	6	Ductile Iron	130	0.0	-2.00	0.0300
P-414	2	J-284	J-600	6	Ductile Iron	130	0.0	2.00	0.0300
P-415	372	J-600	J-441	6	Ductile Iron	130	0.0	4.00	0.0500
P-416	822	J-614	J-284	6	Ductile Iron	130	0.0	5.00	0.0600
P-417	2	J-284	J-652	6	Ductile Iron	130	0.0	0.00	0.0000
P-418	47	J-263	J-24	16	Ductile Iron	130	0.0	0.00	0.0000
P-419	5	J-24	J-254	16	Ductile Iron	130	0.0	2.00	0.0000
P-435	17	J-400	J-534	6	Ductile Iron	130	0.0	11.00	0.1300
P-437	1	J-534	J-639	6	Ductile Iron	130	0.0	12.00	0.1400
P-438	27	J-639	J-401	6	Ductile Iron	130	0.0	14.00	0.1600
P-441	17	J-426	J-640	6	Ductile Iron	130	0.0	12.00	0.1300
P-443	1	J-640	J-641	6	Ductile Iron	130	0.0	10.00	0.1200
P-444	32	J-641	J-427	6	Ductile Iron	130	0.0	13.00	0.1500
P-445	14	J-421	J-642	6	Ductile Iron	130	0.0	13.00	0.1500
P-447	1	J-642	J-592	6	Ductile Iron	130	0.0	10.00	0.1200
P-448	34	J-592	J-422	6	Ductile Iron	130	0.0	13.00	0.1500
P-449	17	J-385	J-673	6	Ductile Iron	130	0.0	5.00	0.0600
P-451	1	J-673	J-624	6	Ductile Iron	130	0.0	7.00	0.0700
P-452	24	J-624	J-386	6	Ductile Iron	130	0.0	5.00	0.0600
P-453	24	J-321	J-69	12	Ductile Iron	130	0.0	-13.00	0.0400
P-454	5	J-69	J-322	12	Ductile Iron	130	0.0	-13.00	0.0400
P-457	90	J-581	J-4	16	Ductile Iron	130	0.0	12.00	0.0200
P-459	269	J-465	J-383	12	Ductile Iron	130	0.0	-100.00	0.2800
P-460	341	J-383	J-348	12	Ductile Iron	130	0.0	52.00	0.1500
P-462	69	J-271	J-404	12	Ductile Iron	130	0.0	-33.00	0.0900
P-463	312	J-404	J-664	12	Ductile Iron	130	0.0	-33.00	0.0900
P-464	82	J-4	J-405	16	Ductile Iron	130	0.0	8.00	0.0100
P-465	98	J-405	J-435	16	Ductile Iron	130	0.0	8.00	0.0100
P-475	22	J-20	J-408	16	Ductile Iron	130	0.0	-97.00	0.1500
P-476	601	J-408	J-635	16	Ductile Iron	130	0.0	-97.00	0.1500
P-483	52	J-136	J-412	6	Ductile Iron	130	0.0	14.00	0.1600
P-484	372	J-412	J-565	6	Ductile Iron	130	0.0	14.00	0.1600
P-487	20	J-264	J-414	8	Ductile Iron	130	0.0	-5.00	0.0300
P-488	218	J-414	J-234	8	Ductile Iron	130	0.0	-5.00	0.0300
P-496	136	J-664	J-421	12	Ductile Iron	130	0.0	-51.00	0.1400
P-497	191	J-421	J-348	12	Ductile Iron	130	0.0	-51.00	0.1400
P-517	930	J-403	J-394	6	Ductile Iron	130	0.0	-14.00	0.1600
P-518	449	J-622	J-410	6	Ductile Iron	130	0.0	-12.00	0.1400



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-519	224	J-410	J-398	6	Ductile Iron	130	0.0	-12.00	0.1400
P-522	10	J-657	J-432	6	Ductile Iron	130	0.0	-14.00	0.1600
P-523	11	J-432	J-403	6	Ductile Iron	130	0.0	-14.00	0.1600



Label	Elevation(ft)	Flow(gpm)	Hydraulic Grade (ft)
R-1	1300	169	1300
R-2	1287.1	51	1287.1
R-3	1285.38	0	1285.38



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,286.21	0.0	1,457.98	74
J-2	1,286.20	0.0	1,457.98	74
J-3	1,286.21	0.0	1,457.98	74
J-4	1,287.47	0.0	1,457.98	74
J-5	1,287.47	6.0	1,457.98	74
J-6	1,287.63	0.0	1,457.98	74
J-7	1,287.63	0.0	1,457.98	74
J-10	1,282.55	0.0	1,457.84	76
J-11	1,282.55	0.0	1,457.84	76
J-12	1,282.56	0.0	1,457.84	76
J-13	1,295.30	2.0	1,457.92	70
J-14	1,295.31	0.0	1,457.92	70
J-15	1,286.20	0.0	1,457.98	74
J-16	1,286.20	0.0	1,457.98	74
J-19	1,295.33	0.0	1,457.92	70
J-20	1,296.92	0.0	1,458.00	70
J-21	1,296.71	0.0	1,458.00	70
J-22	1,290.04	0.0	1,457.99	73
J-23	1,290.02	1.0	1,457.99	73
J-24	1,293.63	0.0	1,457.96	71
J-25	1,293.62	0.0	1,457.96	71
J-26	1,291.44	0.0	1,457.96	72
J-27	1,291.45	5.0	1,457.96	72
J-28	1,282.60	0.0	1,457.84	76
J-29	1,282.58	0.0	1,457.84	76
J-30	1,291.91	0.0	1,457.92	72
J-31	1,291.90	5.0	1,457.92	72
J-32	1,288.87	0.0	1,457.98	73
J-33	1,288.88	0.0	1,457.98	73
J-34	1,280.00	0.0	1,457.84	77
J-35	1,280.00	5.0	1,457.84	77
J-36	1,290.00	3.0	1,457.91	73
J-37	1,290.00	0.0	1,457.91	73
J-38	1,286.06	0.0	1,457.98	74
J-39	1,286.06	0.0	1,457.98	74
J-40	1,287.34	0.0	1,457.98	74
J-41	1,287.33	0.0	1,457.98	74
J-42	1,286.02	0.0	1,457.98	74
J-43	1,286.02	0.0	1,457.98	74
J-52	1,282.73	5.0	1,457.92	76
J-53	1,282.76	0.0	1,457.92	76
J-56	1,284.34	0.0	1,457.90	75

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-57	1,284.34	0.0	1,457.90	75
J-63	1,288.88	0.0	1,457.98	73
J-64	1,288.88	0.0	1,457.98	73
J-65	1,289.81	5.0	1,457.93	73
J-66	1,289.79	0.0	1,457.93	73
J-67	1,300.00	0.0	1,458.00	68
J-68	1,300.00	0.0	1,458.00	68
J-69	1,300.00	0.0	1,458.00	68
J-70	1,300.00	0.0	1,458.00	68
J-73	1,281.08	0.0	1,457.98	77
J-74	1,281.07	0.0	1,457.98	77
J-75	1,281.71	5.0	1,457.84	76
J-76	1,281.72	0.0	1,457.84	76
J-77	1,290.00	0.0	1,457.96	73
J-78	1,290.00	3.0	1,457.96	73
J-79	1,282.29	5.0	1,457.86	76
J-80	1,282.26	0.0	1,457.86	76
J-81	1,294.53	0.0	1,457.96	71
J-82	1,294.54	0.0	1,457.96	71
J-83	1,288.32	0.0	1,457.98	73
J-84	1,288.30	0.0	1,457.98	73
J-85	1,290.29	3.0	1,457.96	73
J-86	1,290.32	0.0	1,457.96	73
J-87	1,282.10	0.0	1,457.91	76
J-88	1,282.07	4.0	1,457.91	76
J-91	1,282.43	0.0	1,457.84	76
J-92	1,282.41	0.0	1,457.84	76
J-93	1,286.20	0.0	1,457.98	74
J-94	1,286.19	0.0	1,457.98	74
J-95	1,287.69	0.0	1,457.98	74
J-96	1,287.71	0.0	1,457.98	74
J-97	1,287.75	0.0	1,457.98	74
J-98	1,287.77	8.0	1,457.98	74
J-99	1,287.97	0.0	1,457.98	74
J-100	1,287.97	0.0	1,457.98	74
J-101	1,288.28	0.0	1,457.98	73
J-102	1,288.30	0.0	1,457.98	73
J-105	1,285.07	0.0	1,457.89	75
J-106	1,285.10	4.0	1,457.89	75
J-107	1,296.73	4.0	1,457.92	70
J-108	1,296.73	0.0	1,457.92	70
J-115	1,287.08	0.0	1,457.99	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-116	1,287.10	0.0	1,458.00	74
J-117	1,299.66	0.0	1,458.00	69
J-118	1,299.61	0.0	1,458.00	69
J-123	1,300.00	0.0	1,458.02	68
J-124	1,300.00	0.0	1,458.02	68
J-125	1,280.00	0.0	1,457.92	77
J-126	1,280.00	0.0	1,457.92	77
J-128	1,282.74	0.0	1,457.88	76
J-129	1,282.74	2.0	1,457.88	76
J-130	1,282.41	0.0	1,457.84	76
J-131	1,282.41	0.0	1,457.84	76
J-132	1,287.94	0.0	1,457.98	74
J-133	1,287.95	0.0	1,457.98	74
J-134	1,287.33	0.0	1,457.96	74
J-135	1,287.29	0.0	1,457.96	74
J-136	1,287.37	2.0	1,457.92	74
J-137	1,287.36	0.0	1,457.92	74
J-138	1,280.26	0.0	1,457.88	77
J-139	1,280.30	0.0	1,457.88	77
J-140	1,280.86	0.0	1,457.88	77
J-141	1,280.83	1.0	1,457.88	77
J-142	1,288.87	0.0	1,457.98	73
J-143	1,288.87	0.0	1,457.98	73
J-144	1,280.00	0.0	1,457.94	77
J-145	1,280.00	0.0	1,457.94	77
J-146	1,284.22	0.0	1,457.96	75
J-147	1,284.23	0.0	1,457.96	75
J-148	1,282.74	0.0	1,457.84	76
J-149	1,282.75	0.0	1,457.84	76
J-150	1,282.53	0.0	1,457.96	76
J-151	1,282.57	0.0	1,457.96	76
J-152	1,300.00	0.0	1,458.00	68
J-153	1,300.00	0.0	1,458.00	68
J-154	1,300.00	0.0	1,458.00	68
J-155	1,300.00	0.0	1,458.00	68
J-160	1,285.34	0.0	1,457.96	75
J-161	1,285.38	0.0	1,457.96	75
J-162	1,300.00	0.0	1,458.00	68
J-163	1,300.00	0.0	1,458.00	68
J-164	1,287.53	0.0	1,457.98	74
J-165	1,287.55	0.0	1,457.98	74
J-166	1,284.46	0.0	1,457.89	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-167	1,284.51	3.0	1,457.89	75
J-170	1,280.00	0.0	1,457.84	77
J-173	1,283.43	0.0	1,457.98	76
J-174	1,283.62	0.0	1,457.98	75
J-179	1,293.02	0.0	1,457.96	71
J-180	1,293.00	4.0	1,457.96	71
J-181	1,280.00	0.0	1,457.93	77
J-182	1,280.00	0.0	1,457.93	77
J-183	1,280.00	3.0	1,457.97	77
J-184	1,280.00	0.0	1,457.97	77
J-185	1,282.23	0.0	1,457.96	76
J-186	1,282.18	0.0	1,457.96	76
J-187	1,294.21	0.0	1,457.96	71
J-188	1,294.19	0.0	1,457.96	71
J-189	1,286.00	0.0	1,457.92	74
J-190	1,285.95	2.0	1,457.92	74
J-193	1,290.04	0.0	1,457.96	73
J-195	1,287.68	0.0	1,457.98	74
J-196	1,287.66	0.0	1,457.98	74
J-197	1,283.22	0.0	1,457.88	76
J-198	1,283.22	0.0	1,457.88	76
J-199	1,288.46	0.0	1,457.99	73
J-200	1,288.48	0.0	1,457.99	73
J-203	1,282.25	0.0	1,457.88	76
J-204	1,282.24	3.0	1,457.88	76
J-205	1,288.69	0.0	1,457.98	73
J-212	1,290.41	0.0	1,457.93	72
J-213	1,290.38	4.0	1,457.93	72
J-214	1,295.27	0.0	1,457.92	70
J-215	1,295.85	0.0	1,458.00	70
J-216	1,295.80	0.0	1,458.00	70
J-217	1,288.26	0.0	1,457.98	73
J-218	1,288.29	0.0	1,457.98	73
J-219	1,288.80	1.0	1,457.98	73
J-220	1,288.83	0.0	1,457.98	73
J-221	1,294.52	9.0	1,457.86	71
J-222	1,294.50	0.0	1,457.86	71
J-227	1,280.00	0.0	1,457.94	77
J-232	1,286.38	0.0	1,457.98	74
J-233	1,286.35	0.0	1,457.98	74
J-234	1,282.61	5.0	1,457.84	76
J-235	1,282.14	0.0	1,457.96	76



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-236	1,282.11	0.0	1,457.96	76
J-239	1,282.11	0.0	1,457.96	76
J-240	1,290.00	0.0	1,457.96	73
J-241	1,290.00	0.0	1,457.96	73
J-242	1,290.00	0.0	1,457.96	73
J-243	1,290.00	0.0	1,457.96	73
J-252	1,282.06	0.0	1,457.98	76
J-253	1,282.03	0.0	1,457.98	76
J-254	1,291.78	0.0	1,457.96	72
J-255	1,291.80	0.0	1,457.96	72
J-256	1,290.00	0.0	1,457.96	73
J-257	1,282.23	0.0	1,457.96	76
J-259	1,283.04	0.0	1,457.98	76
J-260	1,282.85	0.0	1,457.98	76
J-261	1,286.03	0.0	1,457.98	74
J-262	1,286.06	3.0	1,457.98	74
J-263	1,290.00	0.0	1,457.96	73
J-264	1,282.88	0.0	1,457.84	76
J-265	1,282.80	3.0	1,457.84	76
J-266	1,282.32	0.0	1,457.96	76
J-271	1,300.00	4.0	1,458.00	68
J-272	1,300.00	0.0	1,458.00	68
J-273	1,282.48	2.0	1,457.84	76
J-274	1,282.44	0.0	1,457.84	76
J-276	1,287.84	0.0	1,457.96	74
J-277	1,287.86	0.0	1,457.96	74
J-278	1,282.73	0.0	1,457.84	76
J-279	1,282.74	0.0	1,457.84	76
J-280	1,288.87	0.0	1,457.98	73
J-281	1,286.24	0.0	1,457.98	74
J-282	1,287.88	0.0	1,457.96	74
J-284	1,289.28	0.0	1,457.97	73
J-285	1,289.33	0.0	1,457.97	73
J-286	1,298.92	2.0	1,458.00	69
J-287	1,298.85	0.0	1,458.00	69
J-290	1,285.77	0.0	1,457.98	75
J-291	1,286.38	0.0	1,457.98	74
J-292	1,300.00	0.0	1,458.00	68
J-293	1,300.00	0.0	1,458.00	68
J-294	1,300.00	0.0	1,458.00	68
J-295	1,300.00	0.0	1,458.00	68
J-296	1,300.00	0.0	1,458.00	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-297	1,300.00	0.0	1,458.00	68
J-298	1,287.88	0.0	1,457.96	74
J-299	1,291.84	0.0	1,457.96	72
J-302	1,300.00	0.0	1,458.00	68
J-305	1,287.21	0.0	1,457.96	74
J-306	1,287.32	0.0	1,457.96	74
J-307	1,288.89	0.0	1,457.98	73
J-311	1,300.00	0.0	1,458.00	68
J-312	1,299.91	1.0	1,458.00	68
J-314	1,282.43	0.0	1,457.96	76
J-315	1,282.43	0.0	1,457.96	76
J-321	1,300.00	0.0	1,458.00	68
J-322	1,300.00	0.0	1,458.00	68
J-323	1,286.23	0.0	1,457.98	74
J-324	1,286.30	0.0	1,457.98	74
J-325	1,286.06	0.0	1,457.98	74
J-326	1,286.10	0.0	1,457.98	74
J-327	1,300.00	0.0	1,458.00	68
J-330	1,287.12	0.0	1,457.98	74
J-333	1,290.06	0.0	1,457.96	73
J-334	1,290.00	0.0	1,457.96	73
J-336	1,299.05	0.0	1,457.92	69
J-337	1,299.07	0.0	1,457.92	69
J-338	1,300.00	0.0	1,458.00	68
J-339	1,300.00	0.0	1,458.00	68
J-340	1,287.48	0.0	1,457.98	74
J-341	1,287.57	0.0	1,457.98	74
J-342	1,300.00	0.0	1,458.00	68
J-345	1,288.34	0.0	1,457.98	73
J-346	1,285.59	0.0	1,457.98	75
J-347	1,300.00	2.0	1,458.01	68
J-348	1,300.00	0.0	1,458.01	68
J-349	1,293.78	0.0	1,457.96	71
J-350	1,293.92	0.0	1,457.96	71
J-355	1,286.32	0.0	1,457.98	74
J-356	1,280.00	0.0	1,457.91	77
J-357	1,280.00	3.0	1,457.91	77
J-358	1,281.00	0.0	1,457.88	77
J-359	1,281.04	0.0	1,457.88	77
J-361	1,282.53	0.0	1,457.84	76
J-362	1,282.60	3.0	1,457.84	76
J-363	1,300.00	0.0	1,458.00	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-364	1,300.00	0.0	1,458.00	68
J-365	1,290.00	1.0	1,457.97	73
J-366	1,290.00	0.0	1,457.97	73
J-367	1,286.28	0.0	1,457.98	74
J-368	1,286.34	0.0	1,457.98	74
J-369	1,290.00	0.0	1,457.97	73
J-370	1,290.00	0.0	1,457.97	73
J-371	1,280.00	0.0	1,457.93	77
J-372	1,280.00	0.0	1,457.93	77
J-373	1,290.21	0.0	1,457.96	73
J-374	1,290.16	0.0	1,457.96	73
J-375	1,288.34	0.0	1,457.96	73
J-377	1,290.00	0.0	1,457.96	73
J-378	1,290.00	0.0	1,457.96	73
J-382	1,300.00	0.0	1,458.00	68
J-383	1,300.00	0.0	1,458.01	68
J-384	1,300.00	0.0	1,458.02	68
J-385	1,294.82	0.0	1,457.96	71
J-386	1,294.65	0.0	1,457.96	71
J-387	1,293.18	0.0	1,457.96	71
J-389	1,280.00	3.0	1,457.90	77
J-390	1,280.00	0.0	1,457.90	77
J-391	1,293.13	0.0	1,457.96	71
J-393	1,300.00	0.0	1,458.00	68
J-394	1,299.97	0.0	1,458.00	68
J-395	1,300.00	0.0	1,458.00	68
J-396	1,300.00	0.0	1,458.00	68
J-397	1,289.50	0.0	1,457.97	73
J-398	1,286.59	0.0	1,457.98	74
J-399	1,286.50	0.0	1,457.98	74
J-400	1,293.77	0.0	1,457.96	71
J-401	1,293.66	0.0	1,457.96	71
J-402	1,288.43	0.0	1,457.99	73
J-403	1,287.92	0.0	1,457.98	74
J-404	1,287.79	0.0	1,457.98	74
J-405	1,300.00	0.0	1,458.00	68
J-406	1,300.00	0.0	1,458.00	68
J-407	1,299.84	0.0	1,458.00	68
J-408	1,299.64	0.0	1,458.00	69
J-409	1,289.66	0.0	1,457.98	73
J-410	1,289.78	0.0	1,457.98	73
J-411	1,300.00	0.0	1,458.00	68

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-412	1,300.00	0.0	1,458.00	68
J-413	1,300.00	0.0	1,458.00	68
J-414	1,286.64	0.0	1,457.98	74
J-415	1,287.00	0.0	1,457.99	74
J-416	1,293.68	0.0	1,457.96	71
J-417	1,299.52	0.0	1,458.00	69
J-418	1,289.42	2.0	1,457.98	73
J-419	1,289.36	0.0	1,457.98	73
J-421	1,290.23	0.0	1,457.96	73
J-422	1,290.24	0.0	1,457.96	73
J-423	1,293.26	0.0	1,457.96	71
J-425	1,294.44	4.0	1,457.96	71
J-426	1,293.12	0.0	1,457.96	71
J-427	1,293.03	0.0	1,457.96	71
J-428	1,294.24	0.0	1,457.96	71
J-429	1,294.04	0.0	1,457.96	71
J-430	1,286.20	0.0	1,457.98	74
J-431	1,286.36	0.0	1,457.98	74
J-432	1,286.47	0.0	1,457.98	74
J-434	1,286.19	0.0	1,457.98	74
J-435	1,287.44	3.0	1,457.98	74
J-436	1,280.00	0.0	1,457.93	77
J-437	1,282.31	0.0	1,457.84	76
J-438	1,287.29	0.0	1,457.98	74
J-439	1,287.36	0.0	1,457.98	74
J-440	1,290.00	0.0	1,457.97	73
J-441	1,290.00	0.0	1,457.97	73
J-442	1,290.00	0.0	1,457.96	73
J-443	1,290.00	0.0	1,457.96	73
J-444	1,288.18	0.0	1,457.96	73
J-446	1,294.31	0.0	1,457.96	71
J-447	1,290.00	1.0	1,457.96	73
J-448	1,287.18	0.0	1,457.96	74
J-449	1,287.13	0.0	1,457.96	74
J-450	1,285.92	0.0	1,457.96	74
J-451	1,285.80	0.0	1,457.96	74
J-453	1,284.32	0.0	1,457.96	75
J-454	1,284.01	0.0	1,457.96	75
J-456	1,290.26	0.0	1,457.96	73
J-457	1,286.15	0.0	1,457.98	74
J-458	1,300.00	0.0	1,458.00	68
J-459	1,300.00	0.0	1,458.00	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-460	1,280.00	0.0	1,457.93	77
J-461	1,280.00	0.0	1,457.93	77
J-462	1,287.98	0.0	1,457.98	74
J-463	1,287.94	0.0	1,457.98	74
J-464	1,300.00	0.0	1,458.00	68
J-465	1,300.00	0.0	1,458.00	68
J-466	1,282.42	0.0	1,457.96	76
J-467	1,288.08	1.0	1,457.98	74
J-468	1,288.27	0.0	1,457.98	73
J-469	1,283.38	0.0	1,457.96	76
J-470	1,283.23	0.0	1,457.96	76
J-471	1,299.01	0.0	1,458.00	69
J-472	1,287.57	0.0	1,457.98	74
J-473	1,287.52	0.0	1,457.98	74
J-475	1,287.67	0.0	1,457.98	74
J-476	1,282.27	0.0	1,457.88	76
J-477	1,281.94	0.0	1,457.88	76
J-478	1,300.00	0.0	1,458.00	68
J-479	1,299.86	0.0	1,458.00	68
J-480	1,299.61	2.0	1,458.00	69
J-483	1,298.69	1.0	1,457.92	69
J-484	1,300.00	0.0	1,458.00	68
J-485	1,288.36	0.0	1,457.96	73
J-487	1,280.00	0.0	1,457.97	77
J-489	1,280.82	0.0	1,457.98	77
J-491	1,280.00	0.0	1,457.97	77
J-492	1,280.00	0.0	1,457.97	77
J-496	1,286.29	0.0	1,457.98	74
J-498	1,287.40	0.0	1,457.98	74
J-499	1,282.76	0.0	1,457.84	76
J-500	1,280.00	0.0	1,457.93	77
J-501	1,286.30	0.0	1,457.98	74
J-502	1,286.55	0.0	1,457.98	74
J-504	1,286.78	0.0	1,457.98	74
J-505	1,287.22	0.0	1,457.98	74
J-506	1,287.19	0.0	1,457.99	74
J-509	1,284.54	0.0	1,457.98	75
J-510	1,285.23	0.0	1,457.98	75
J-511	1,299.59	0.0	1,458.00	69
J-512	1,280.00	0.0	1,457.94	77
J-513	1,285.85	0.0	1,457.98	74
J-514	1,286.50	0.0	1,457.98	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-516	1,290.00	2.0	1,457.99	73
J-518	1,285.84	0.0	1,457.98	74
J-519	1,290.31	0.0	1,457.96	73
J-520	1,293.47	4.0	1,457.95	71
J-524	1,281.77	0.0	1,457.98	76
J-526	1,287.21	0.0	1,457.98	74
J-528	1,289.60	0.0	1,457.98	73
J-531	1,281.18	0.0	1,457.98	76
J-532	1,287.52	0.0	1,457.96	74
J-533	1,294.10	0.0	1,457.96	71
J-534	1,293.74	0.0	1,457.96	71
J-535	1,287.45	0.0	1,457.98	74
J-536	1,287.54	0.0	1,457.98	74
J-537	1,288.06	0.0	1,457.98	74
J-543	1,285.32	0.0	1,457.96	75
J-544	1,290.00	1.0	1,457.99	73
J-546	1,286.30	0.0	1,457.98	74
J-547	1,281.20	1.0	1,457.89	76
J-550	1,288.60	0.0	1,457.98	73
J-551	1,289.52	2.0	1,457.98	73
J-552	1,299.98	0.0	1,458.00	68
J-557	1,284.17	0.0	1,457.96	75
J-558	1,282.88	0.0	1,457.84	76
J-559	1,282.73	0.0	1,457.84	76
J-560	1,282.06	1.0	1,457.88	76
J-561	1,283.24	3.0	1,457.88	76
J-562	1,286.82	0.0	1,457.98	74
J-563	1,290.00	0.0	1,457.96	73
J-565	1,285.36	0.0	1,457.90	75
J-568	1,287.63	0.0	1,457.98	74
J-571	1,293.10	0.0	1,457.96	71
J-572	1,282.00	0.0	1,457.88	76
J-573	1,292.36	1.0	1,457.99	72
J-578	1,294.30	1.0	1,457.99	71
J-579	1,280.00	0.0	1,457.97	77
J-580	1,290.00	0.0	1,457.96	73
J-581	1,287.61	3.0	1,457.98	74
J-582	1,280.00	0.0	1,457.92	77
J-583	1,286.49	0.0	1,457.98	74
J-585	1,290.00	4.0	1,457.96	73
J-587	1,293.57	4.0	1,457.86	71
J-588	1,296.06	2.0	1,457.93	70



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-590	1,284.18	4.0	1,457.92	75
J-591	1,293.46	8.0	1,457.85	71
J-592	1,290.15	0.0	1,457.96	73
J-593	1,290.05	0.0	1,457.96	73
J-594	1,280.96	0.0	1,457.84	77
J-596	1,287.73	0.0	1,457.98	74
J-597	1,280.52	0.0	1,457.96	77
J-598	1,283.73	0.0	1,457.98	75
J-599	1,282.35	0.0	1,457.98	76
J-600	1,289.29	1.0	1,457.97	73
J-602	1,280.00	0.0	1,457.97	77
J-605	1,280.25	5.0	1,457.88	77
J-606	1,280.72	1.0	1,457.88	77
J-607	1,282.85	0.0	1,457.98	76
J-608	1,289.62	0.0	1,457.96	73
J-609	1,284.63	2.0	1,457.89	75
J-610	1,298.28	0.0	1,458.00	69
J-613	1,287.22	1.0	1,457.98	74
J-614	1,286.42	1.0	1,457.98	74
J-615	1,284.29	0.0	1,457.90	75
J-616	1,287.06	8.0	1,457.90	74
J-617	1,294.88	2.0	1,457.99	71
J-618	1,297.09	0.0	1,458.00	70
J-619	1,291.42	0.0	1,457.96	72
J-620	1,280.00	0.0	1,457.96	77
J-621	1,289.98	8.0	1,457.87	73
J-622	1,288.84	8.0	1,457.88	73
J-623	1,287.65	0.0	1,457.96	74
J-624	1,294.76	0.0	1,457.96	71
J-625	1,287.04	0.0	1,457.96	74
J-626	1,300.00	0.0	1,458.00	68
J-627	1,280.00	0.0	1,457.96	77
J-628	1,282.30	0.0	1,457.96	76
J-629	1,287.12	3.0	1,457.96	74
J-630	1,287.21	3.0	1,457.96	74
J-632	1,287.88	5.0	1,457.92	74
J-633	1,285.82	3.0	1,457.92	74
J-635	1,300.00	0.0	1,458.00	68
J-638	1,293.02	0.0	1,457.99	71
J-639	1,293.71	0.0	1,457.96	71
J-640	1,293.11	0.0	1,457.96	71
J-641	1,293.07	0.0	1,457.96	71



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-642	1,290.16	0.0	1,457.96	73
J-643	1,290.00	0.0	1,457.99	73
J-646	1,287.37	0.0	1,457.98	74
J-647	1,290.63	9.0	1,457.91	72
J-648	1,283.82	2.0	1,457.92	75
J-649	1,289.38	0.0	1,457.98	73
J-651	1,290.10	3.0	1,457.91	73
J-652	1,289.27	0.0	1,457.97	73
J-656	1,293.63	5.0	1,457.92	71
J-657	1,296.44	5.0	1,457.93	70
J-658	1,294.35	5.0	1,457.91	71
J-661	1,300.00	0.0	1,458.00	68
J-662	1,287.37	0.0	1,457.98	74
J-664	1,300.00	3.0	1,458.01	68
J-665	1,298.00	5.0	1,457.93	69
J-667	1,282.25	0.0	1,457.96	76
J-673	1,294.74	0.0	1,457.96	71
J-1	1,280.00	0.0	1,457.96	77
J-2	1,280.00	0.0	1,457.96	77
J-5	1,280.32	0.0	1,457.96	77
J-6	1,280.33	0.0	1,457.96	77
J-7	1,280.26	0.0	1,457.96	77
J-8	1,280.27	0.0	1,457.96	77
J-9	1,280.00	0.0	1,457.96	77
J-10	1,280.00	0.0	1,457.96	77
J-13	1,280.00	0.0	1,457.96	77
J-14	1,280.00	0.0	1,457.96	77
J-15	1,280.00	0.0	1,457.96	77
J-16	1,280.00	0.0	1,457.96	77
J-17	1,280.00	0.0	1,457.96	77
J-18	1,280.00	0.0	1,457.96	77
J-19	1,280.00	0.0	1,457.96	77
J-20	1,280.00	0.0	1,457.96	77
J-21	1,280.00	0.0	1,457.97	77
J-22	1,280.00	0.0	1,457.97	77
J-23	1,280.20	0.0	1,457.96	77
J-24	1,280.23	0.0	1,457.96	77
J-33	1,280.00	0.0	1,457.96	77
J-34	1,280.00	0.0	1,457.96	77
J-43	1,280.00	0.0	1,457.96	77
J-44	1,280.00	0.0	1,457.96	77
J-47	1,280.00	0.0	1,457.96	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-48	1,280.00	0.0	1,457.96	77
J-49	1,280.29	0.0	1,457.96	77
J-50	1,280.32	0.0	1,457.96	77
J-51	1,283.91	0.0	1,457.96	75
J-52	1,283.91	0.0	1,457.96	75
J-53	1,281.92	0.0	1,457.96	76
J-54	1,281.95	0.0	1,457.96	76
J-55	1,280.00	0.0	1,457.96	77
J-56	1,280.00	0.0	1,457.96	77
J-61	1,280.00	0.0	1,457.94	77
J-62	1,280.00	0.0	1,457.94	77
J-63	1,280.00	0.0	1,457.97	77
J-64	1,280.00	0.0	1,457.97	77
J-65	1,280.00	0.0	1,457.97	77
J-66	1,280.00	0.0	1,457.97	77
J-67	1,280.00	0.0	1,457.96	77
J-68	1,280.00	0.0	1,457.96	77
J-69	1,280.00	0.0	1,457.96	77
J-70	1,280.00	0.0	1,457.96	77
J-71	1,280.00	0.0	1,457.96	77
J-72	1,280.00	0.0	1,457.96	77
J-73	1,280.00	0.0	1,457.96	77
J-74	1,280.00	0.0	1,457.96	77
J-77	1,280.00	0.0	1,457.96	77
J-78	1,280.00	0.0	1,457.96	77
J-81	1,280.00	0.0	1,457.96	77
J-82	1,280.00	0.0	1,457.96	77
J-85	1,280.00	0.0	1,457.96	77
J-86	1,280.00	0.0	1,457.96	77
J-91	1,280.00	0.0	1,457.95	77
J-101	1,280.00	0.0	1,457.96	77
J-102	1,280.00	0.0	1,457.96	77
J-106	1,280.00	0.0	1,457.96	77
J-107	1,280.00	0.0	1,457.96	77
J-120	1,280.41	0.0	1,457.96	77
J-121	1,280.41	0.0	1,457.96	77
J-125	1,280.00	0.0	1,457.96	77
J-126	1,280.00	0.0	1,457.96	77
J-129	1,286.89	0.0	1,457.96	74
J-131	1,280.34	0.0	1,457.96	77
J-132	1,280.25	0.0	1,457.96	77
J-137	1,280.00	0.0	1,457.96	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-138	1,280.00	0.0	1,457.96	77
J-139	1,280.00	0.0	1,457.96	77
J-140	1,280.00	0.0	1,457.96	77
J-142	1,280.00	0.0	1,457.96	77
J-143	1,280.00	0.0	1,457.96	77
J-150	1,280.00	0.0	1,457.96	77
J-151	1,280.00	0.0	1,457.96	77
J-152	1,280.00	0.0	1,457.96	77
J-153	1,280.00	0.0	1,457.96	77
J-154	1,280.00	0.0	1,457.96	77
J-155	1,280.00	0.0	1,457.96	77
J-156	1,280.00	0.0	1,457.96	77
J-157	1,280.00	0.0	1,457.96	77
J-163	1,280.00	0.0	1,457.96	77
J-164	1,280.00	0.0	1,457.96	77
J-165	1,280.00	0.0	1,457.96	77
J-166	1,280.00	0.0	1,457.96	77
J-167	1,280.00	0.0	1,457.97	77
J-168	1,280.00	0.0	1,457.96	77
J-169	1,280.00	0.0	1,457.96	77
J-171	1,280.00	0.0	1,457.96	77
J-172	1,280.00	0.0	1,457.96	77
J-177	1,280.00	0.0	1,457.96	77
J-178	1,280.00	0.0	1,457.96	77
J-181	1,284.14	0.0	1,457.96	75
J-185	1,280.00	0.0	1,457.96	77
J-186	1,280.00	0.0	1,457.96	77
J-189	1,280.00	0.0	1,457.96	77
J-190	1,280.00	0.0	1,457.96	77
J-191	1,280.00	0.0	1,457.96	77
J-192	1,280.00	0.0	1,457.96	77
J-193	1,280.00	0.0	1,457.96	77
J-194	1,280.00	0.0	1,457.96	77
J-195	1,280.46	0.0	1,457.96	77
J-196	1,280.32	0.0	1,457.96	77
J-197	1,283.77	0.0	1,457.96	75
J-200	1,280.00	0.0	1,457.96	77
J-201	1,280.00	0.0	1,457.96	77
J-202	1,280.09	0.0	1,457.96	77
J-203	1,280.00	0.0	1,457.96	77
J-204	1,280.11	0.0	1,457.96	77
J-209	1,280.12	0.0	1,457.96	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-210	1,280.00	0.0	1,457.96	77
J-212	1,280.00	0.0	1,457.96	77
J-213	1,280.00	0.0	1,457.96	77
J-214	1,280.00	0.0	1,457.96	77
J-215	1,280.00	0.0	1,457.96	77
J-222	1,280.21	0.0	1,457.96	77
J-223	1,280.00	0.0	1,457.96	77
J-224	1,280.00	0.0	1,457.96	77
J-225	1,280.00	0.0	1,457.96	77
J-226	1,280.00	0.0	1,457.96	77
J-227	1,280.00	0.0	1,457.96	77
J-229	1,284.25	0.0	1,457.96	75
J-231	1,280.00	0.0	1,457.96	77
J-232	1,285.15	0.0	1,457.96	75
J-233	1,285.17	0.0	1,457.96	75
J-235	1,281.81	0.0	1,457.96	76
J-237	1,283.17	0.0	1,457.96	76
J-239	1,285.61	0.0	1,457.96	75
J-242	1,286.43	0.0	1,457.96	74
J-244	1,280.00	0.0	1,457.96	77
J-245	1,280.00	0.0	1,457.96	77
J-246	1,280.00	0.0	1,457.96	77
J-247	1,280.00	0.0	1,457.95	77
J-250	1,283.79	0.0	1,457.96	75
J-254	1,280.26	0.0	1,457.96	77
J-255	1,280.53	0.0	1,457.96	77
J-260	1,280.00	0.0	1,457.96	77
J-262	1,280.08	0.0	1,457.96	77
J-263	1,280.02	0.0	1,457.96	77
J-266	1,280.00	0.0	1,457.94	77
J-268	1,280.56	0.0	1,457.96	77
J-270	1,280.00	0.0	1,457.96	77
J-272	1,285.07	0.0	1,457.96	75
J-276	1,280.00	0.0	1,457.96	77
J-277	1,280.00	0.0	1,457.96	77
J-282	1,283.67	0.0	1,457.96	75
J-284	1,280.00	0.0	1,457.96	77
J-287	1,280.00	0.0	1,457.96	77
J-291	1,280.00	0.0	1,457.97	77
J-293	1,280.00	0.0	1,457.96	77
J-296	1,280.00	0.0	1,457.96	77
J-297	1,280.00	0.0	1,457.96	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-298	1,280.00	0.0	1,457.96	77
J-301	1,280.00	0.0	1,457.96	77
J-302	1,280.00	0.0	1,457.96	77
J-312	1,280.00	0.0	1,457.96	77
J-321	1,280.00	0.0	1,457.96	77
J-322	1,280.00	0.0	1,457.96	77
J-324	1,280.00	0.0	1,457.97	77
J-325	1,280.00	0.0	1,457.96	77
J-326	1,280.00	0.0	1,457.95	77
J-327	1,280.00	0.0	1,457.96	77
J-331	1,280.00	0.0	1,457.96	77
J-332	1,280.00	0.0	1,457.96	77
J-336	1,280.00	0.0	1,457.96	77
J-340	1,280.00	0.0	1,457.96	77
J-343	1,280.00	0.0	1,457.96	77
J-349	1,280.00	0.0	1,457.96	77
J-353	1,280.00	0.0	1,457.96	77
J-355	1,280.00	0.0	1,457.96	77
J-363	1,280.00	0.0	1,457.96	77
J-365	1,280.00	0.0	1,457.96	77
J-366	1,280.55	0.0	1,457.96	77
J-367	1,280.00	0.0	1,457.96	77
J-370	1,280.00	0.0	1,457.96	77
J-372	1,280.00	0.0	1,457.96	77
J-373	1,280.00	0.0	1,457.96	77
J-375	1,280.00	0.0	1,457.96	77
J-378	1,280.00	0.0	1,457.96	77
J-380	1,291.16	5.0	1,457.95	72
J-381	1,290.64	4.0	1,457.94	72
J-382	1,291.34	1.0	1,457.93	72
J-383	1,292.53	5.0	1,457.92	72
J-384	1,293.13	3.0	1,457.93	71
J-385	1,291.24	3.0	1,457.94	72
J-386	1,292.88	2.0	1,457.92	71
J-387	1,290.03	3.0	1,457.96	73
J-388	1,295.17	6.0	1,457.92	70
J-389	1,298.00	3.0	1,457.96	69
J-391	1,296.18	6.0	1,457.93	70
J-392	1,299.02	5.0	1,457.96	69
J-394	1,298.41	5.0	1,457.97	69
J-397	1,290.98	8.0	1,457.86	72
J-398	1,287.47	5.0	1,457.93	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-401	1,294.11	0.0	1,457.96	71
J-403	1,296.44	0.0	1,457.93	70
J-404	1,300.00	0.0	1,458.00	68
J-405	1,287.46	0.0	1,457.98	74
J-408	1,297.02	0.0	1,458.00	70
J-410	1,287.47	0.0	1,457.91	74
J-412	1,287.12	0.0	1,457.92	74
J-414	1,282.85	0.0	1,457.84	76
J-421	1,300.00	0.0	1,458.01	68
J-432	1,296.44	0.0	1,457.93	70



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
1907	1,015	J-661	J-626	30	Ductile Iron	130	0.0	80.00	0.0400
1908	62	J-464	J-465	12	Ductile Iron	130	0.0	-80.00	0.2300
3565	8	J-166	J-167	6	Ductile Iron	130	0.0	0.00	0.0000
3566	6	J-105	J-106	6	Ductile Iron	130	0.0	0.00	0.0000
3961	6	J-93	J-94	6	Ductile Iron	130	0.0	0.00	0.0000
3962	49	J-15	J-326	16	Ductile Iron	130	0.0	1.00	0.0000
3963	2	J-15	J-16	16	Ductile Iron	130	0.0	-1.00	0.0000
3983	526	J-573	J-544	8	Ductile Iron	130	0.0	11.00	0.0700
4153	512	J-618	J-610	8	Ductile Iron	130	0.0	-14.00	0.0900
4154	14	J-215	J-216	6	Ductile Iron	130	0.0	0.00	0.0000
4308	289	J-585	J-78	6	Ductile Iron	130	0.0	-4.00	0.0400
4311	9	J-189	J-190	6	Ductile Iron	130	0.0	0.00	0.0000
4312	305	J-222	J-587	6	Ductile Iron	130	0.0	12.00	0.1400
8447	57	J-68	J-342	16	Ductile Iron	130	0.0	0.00	0.0000
8449	40	J-382	J-67	16	Ductile Iron	130	0.0	-75.00	0.1200
8823	20	J-302	J-70	12	Ductile Iron	130	0.0	0.00	0.0000
8825	75	J-478	J-322	12	Ductile Iron	130	0.0	-4.00	0.0100
12390	66	J-465	J-393	12	Ductile Iron	130	0.0	14.00	0.0400
12392	31	J-338	J-339	6	Ductile Iron	130	0.0	0.00	0.0000
12393	297	J-411	J-363	12	Ductile Iron	130	0.0	-1.00	0.0000
12395	981	J-221	J-657	6	Ductile Iron	130	0.0	-22.00	0.2500
12397	682	J-367	J-646	6	Ductile Iron	130	0.0	3.00	0.0300
12398	4	J-32	J-33	6	Ductile Iron	130	0.0	0.00	0.0000
12400	159	J-550	J-551	6	Ductile Iron	130	0.0	2.00	0.0200
12401	236	J-550	J-32	6	Ductile Iron	130	0.0	-6.00	0.0700
12402	1,024	J-502	J-550	6	Ductile Iron	130	0.0	-4.00	0.0500
14457	1,098	J-476	J-359	6	Ductile Iron	130	0.0	2.00	0.0200
14458	206	J-561	J-476	6	Ductile Iron	130	0.0	6.00	0.0700
14459	34	J-358	J-359	6	Ductile Iron	130	0.0	0.00	0.0000
14460	442	J-204	J-129	6	Ductile Iron	130	0.0	-2.00	0.0200
14461	11	J-203	J-204	6	Ductile Iron	130	0.0	0.00	0.0000
14462	7	J-128	J-129	6	Ductile Iron	130	0.0	0.00	0.0000
14463	11	J-197	J-198	6	Ductile Iron	130	0.0	0.00	0.0000
14465	447	J-565	J-561	6	Ductile Iron	130	0.0	14.00	0.1600
14466	630	J-106	J-167	6	Ductile Iron	130	0.0	5.00	0.0500
14467	610	J-284	J-136	6	Ductile Iron	130	0.0	25.00	0.2800
14477	525	J-624	J-533	6	Ductile Iron	130	0.0	2.00	0.0200
14478	694	J-27	J-425	6	Ductile Iron	130	0.0	-5.00	0.0500
14479	657	J-639	J-640	6	Ductile Iron	130	0.0	-2.00	0.0300
14481	658	J-641	J-642	6	Ductile Iron	130	0.0	-4.00	0.0400
14483	8	J-179	J-180	6	Ductile Iron	130	0.0	0.00	0.0000
14484	10	J-212	J-213	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
14485	5	J-81	J-82	6	Ductile Iron	130	0.0	0.00	0.0000
14486	3	J-26	J-27	6	Ductile Iron	130	0.0	0.00	0.0000
14487	3	J-24	J-25	6	Ductile Iron	130	0.0	0.00	0.0000
14488	4	J-30	J-31	6	Ductile Iron	130	0.0	0.00	0.0000
14494	1,330	J-646	J-501	6	Ductile Iron	130	0.0	3.00	0.0300
14496	26	J-325	J-326	6	Ductile Iron	130	0.0	0.00	0.0000
19501	5	J-23	J-24	16	Ductile Iron	130	0.0	0.00	0.0000
19507	15	J-120	J-121	16	Ductile Iron	130	0.0	-4.00	0.0100
19510	5	J-19	J-20	12	Ductile Iron	130	0.0	0.00	0.0000
19511	5	J-17	J-18	12	Ductile Iron	130	0.0	0.00	0.0000
19512	366	J-19	J-17	16	Ductile Iron	130	0.0	-4.00	0.0100
19514	5	J-15	J-16	12	Ductile Iron	130	0.0	0.00	0.0000
19515	413	J-15	J-298	16	Ductile Iron	130	0.0	-4.00	0.0100
19516	88	J-298	J-185	16	Ductile Iron	130	0.0	-4.00	0.0100
19517	25	J-185	J-186	16	Ductile Iron	130	0.0	-4.00	0.0100
19520	39	J-186	J-231	16	Ductile Iron	130	0.0	-4.00	0.0100
19522	25	J-189	J-190	12	Ductile Iron	130	0.0	-4.00	0.0100
19526	2	J-7	J-8	0.8	Ductile Iron	130	0.0	0.00	0.0000
19527	2	J-5	J-6	0.8	Ductile Iron	130	0.0	0.00	0.0000
21371	649	J-385	J-400	16	Ductile Iron	130	0.0	-13.00	0.0200
21372	659	J-426	J-421	16	Ductile Iron	130	0.0	-49.00	0.0800
21374	349	J-439	J-432	16	Ductile Iron	130	0.0	-102.00	0.1600
21395	53	J-428	J-429	6	Ductile Iron	130	0.0	0.00	0.0000
21709	365	J-435	J-504	16	Ductile Iron	130	0.0	27.00	0.0400
21710	85	J-496	J-355	16	Ductile Iron	130	0.0	-5.00	0.0100
21711	37	J-367	J-368	6	Ductile Iron	130	0.0	0.00	0.0000
21712	13	J-232	J-233	6	Ductile Iron	130	0.0	-28.00	0.3200
21713	16	J-261	J-262	6	Ductile Iron	130	0.0	4.00	0.0500
21714	4	J-4	J-5	6	Ductile Iron	130	0.0	6.00	0.0600
21715	1	J-6	J-7	16	Ductile Iron	130	0.0	0.00	0.0000
21716	6	J-115	J-116	6	Ductile Iron	130	0.0	-168.00	1.9100
21717	1	J-1	J-3	16	Ductile Iron	130	0.0	0.00	0.0000
21718	1	J-1	J-2	16	Ductile Iron	130	0.0	0.00	0.0000
21719	26	J-323	J-324	6	Ductile Iron	130	0.0	0.00	0.0000
21720	20	J-284	J-285	6	Ductile Iron	130	0.0	-26.00	0.2900
21722	53	J-440	J-441	6	Ductile Iron	130	0.0	0.00	0.0000
21723	38	J-369	J-370	6	Ductile Iron	130	0.0	0.00	0.0000
21724	29	J-333	J-334	6	Ductile Iron	130	0.0	6.00	0.0700
24188	60	J-458	J-459	6	Ductile Iron	130	0.0	0.00	0.0000
24513	20	J-294	J-295	8	Ductile Iron	130	0.0	-1.00	0.0000
24514	20	J-296	J-297	8	Ductile Iron	130	0.0	-2.00	0.0100
24515	45	J-405	J-411	8	Ductile Iron	130	0.0	-1.00	0.0100



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
24516	45	J-412	J-413	8	Ductile Iron	130	0.0	-2.00	0.0100
24517	300	J-294	J-312	8	Ductile Iron	130	0.0	1.00	0.0000
24518	303	J-296	J-479	8	Ductile Iron	130	0.0	2.00	0.0100
24519	22	J-311	J-312	6	Ductile Iron	130	0.0	0.00	0.0000
24520	74	J-479	J-480	8	Ductile Iron	130	0.0	2.00	0.0100
25253	4	J-56	J-57	6	Ductile Iron	130	0.0	0.00	0.0000
25254	6	J-36	J-37	6	Ductile Iron	130	0.0	-3.00	0.0300
25255	6	J-87	J-88	6	Ductile Iron	130	0.0	0.00	0.0000
25256	5	J-52	J-53	6	Ductile Iron	130	0.0	0.00	0.0000
25257	5	J-65	J-66	6	Ductile Iron	130	0.0	0.00	0.0000
25258	5	J-85	J-86	6	Ductile Iron	130	0.0	0.00	0.0000
25283	7	J-154	J-155	4	Ductile Iron	130	0.0	0.00	0.0000
25284	7	J-152	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
25564	299	J-588	J-214	6	Ductile Iron	130	0.0	7.00	0.0800
25565	445	J-107	J-13	6	Ductile Iron	130	0.0	-5.00	0.0600
25566	6	J-107	J-108	6	Ductile Iron	130	0.0	0.00	0.0000
25595	7	J-77	J-78	6	Ductile Iron	130	0.0	0.00	0.0000
27024	49	J-254	J-255	16	Ductile Iron	130	0.0	4.00	0.0100
27025	34	J-23	J-222	16	Ductile Iron	130	0.0	0.00	0.0000
27504	117	J-393	J-162	8	Ductile Iron	130	0.0	0.00	0.0000
27505	10	J-162	J-163	6	Ductile Iron	130	0.0	0.00	0.0000
27906	504	J-281	J-505	8	Ductile Iron	130	0.0	-8.00	0.0500
27908	632	J-505	J-402	8	Ductile Iron	130	0.0	-8.00	0.0500
27909	12	J-199	J-200	6	Ductile Iron	130	0.0	0.00	0.0000
28144	138	J-516	J-544	8	Ductile Iron	130	0.0	-10.00	0.0700
29987	75	J-483	J-336	6	Ductile Iron	130	0.0	0.00	0.0000
29988	30	J-336	J-337	6	Ductile Iron	130	0.0	0.00	0.0000
30003	6	J-69	J-70	12	Ductile Iron	130	0.0	0.00	0.0000
30004	115	J-526	J-462	8	Ductile Iron	130	0.0	0.00	0.0000
30005	310	J-583	J-526	16	Ductile Iron	130	0.0	-27.00	0.0400
30006	273	J-537	J-205	16	Ductile Iron	130	0.0	-30.00	0.0500
30007	9	J-195	J-196	6	Ductile Iron	130	0.0	-6.00	0.0700
30009	45	J-409	J-410	6	Ductile Iron	130	0.0	0.00	0.0000
30010	683	J-205	J-643	16	Ductile Iron	130	0.0	-37.00	0.0600
30011	647	J-643	J-22	16	Ductile Iron	130	0.0	-73.00	0.1200
30012	3	J-22	J-23	12	Ductile Iron	130	0.0	1.00	0.0000
30015	640	J-22	J-638	16	Ductile Iron	130	0.0	-74.00	0.1200
30017	3	J-20	J-21	8	Ductile Iron	130	0.0	0.00	0.0000
30021	617	J-635	J-484	16	Ductile Iron	130	0.0	-75.00	0.1200
30023	21	J-292	J-293	6	Ductile Iron	130	0.0	0.00	0.0000
30389	117	J-524	J-531	12	Ductile Iron	130	0.0	44.00	0.1200
30390	19	J-252	J-253	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30392	88	J-499	J-278	6	Ductile Iron	130	0.0	0.00	0.0000
30393	435	J-599	J-607	16	Ductile Iron	130	0.0	-44.00	0.0700
30394	14	J-259	J-260	6	Ductile Iron	130	0.0	0.00	0.0000
30395	8	J-173	J-174	6	Ductile Iron	130	0.0	0.00	0.0000
30397	358	J-598	J-509	16	Ductile Iron	130	0.0	-44.00	0.0700
30398	98	J-509	J-510	6	Ductile Iron	130	0.0	0.00	0.0000
30399	398	J-509	J-346	16	Ductile Iron	130	0.0	-44.00	0.0700
30400	105	J-346	J-518	16	Ductile Iron	130	0.0	-24.00	0.0400
30401	102	J-513	J-514	6	Ductile Iron	130	0.0	0.00	0.0000
40954	162	J-407	J-552	8	Ductile Iron	130	0.0	1.00	0.0100
40955	166	J-511	J-412	8	Ductile Iron	130	0.0	-2.00	0.0100
40956	54	J-407	J-408	6	Ductile Iron	130	0.0	0.00	0.0000
40957	6	J-117	J-118	6	Ductile Iron	130	0.0	0.00	0.0000
40958	19	J-286	J-287	6	Ductile Iron	130	0.0	0.00	0.0000
44165	278	J-79	J-28	6	Ductile Iron	130	0.0	22.00	0.2500
44167	5	J-79	J-80	6	Ductile Iron	130	0.0	0.00	0.0000
44168	5	J-75	J-76	6	Ductile Iron	130	0.0	0.00	0.0000
44169	8	J-35	J-170	6	Ductile Iron	130	0.0	0.00	0.0000
45230	35	J-190	J-223	12	Ductile Iron	130	0.0	-4.00	0.0100
45231	13	J-106	J-107	1	Ductile Iron	130	0.0	0.00	0.0000
45232	8	J-67	J-68	6	Ductile Iron	130	0.0	0.00	0.0000
45234	8	J-69	J-70	6	Ductile Iron	130	0.0	0.00	0.0000
45236	22	J-165	J-166	12	Ductile Iron	130	0.0	-4.00	0.0100
45237	293	J-166	J-363	12	Ductile Iron	130	0.0	-4.00	0.0100
45238	10	J-81	J-82	6	Ductile Iron	130	0.0	0.00	0.0000
45239	8	J-73	J-74	6	Ductile Iron	130	0.0	0.00	0.0000
45241	22	J-168	J-169	12	Ductile Iron	130	0.0	-4.00	0.0100
45242	148	J-169	J-296	12	Ductile Iron	130	0.0	-4.00	0.0100
45245	10	J-77	J-78	6	Ductile Iron	130	0.0	0.00	0.0000
45247	89	J-301	J-302	6	Ductile Iron	130	0.0	0.00	0.0000
45248	106	J-321	J-246	8	Ductile Iron	130	0.0	37.00	0.2400
45249	8	J-71	J-72	6	Ductile Iron	130	0.0	0.00	0.0000
45251	13	J-101	J-102	1	Ductile Iron	130	0.0	0.00	0.0000
45252	85	J-297	J-163	12	Ductile Iron	130	0.0	-41.00	0.1200
45253	22	J-163	J-164	12	Ductile Iron	130	0.0	-41.00	0.1200
45257	8	J-63	J-64	6	Ductile Iron	130	0.0	0.00	0.0000
45260	5	J-21	J-22	1	Ductile Iron	130	0.0	0.00	0.0000
45261	107	J-324	J-602	8	Ductile Iron	130	0.0	0.00	0.0000
45262	8	J-65	J-66	6	Ductile Iron	130	0.0	0.00	0.0000
45263	277	J-65	J-167	12	Ductile Iron	130	0.0	-41.00	0.1200
45264	22	J-167	J-579	12	Ductile Iron	130	0.0	-41.00	0.1200
45268	9	J-183	J-184	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
45271	5	J-73	J-74	1	Ductile Iron	130	0.0	0.00	0.0000
45410	41	J-377	J-378	6	Ductile Iron	130	0.0	0.00	0.0000
45970	15	J-264	J-265	6	Ductile Iron	130	0.0	3.00	0.0300
45972	7	J-136	J-137	6	Ductile Iron	130	0.0	0.00	0.0000
45973	37	J-365	J-366	6	Ductile Iron	130	0.0	0.00	0.0000
45975	38	J-373	J-374	6	Ductile Iron	130	0.0	0.00	0.0000
45998	55	J-61	J-266	8	Ductile Iron	130	0.0	0.00	0.0000
45999	7	J-61	J-62	8	Ductile Iron	130	0.0	0.00	0.0000
47269	114	J-512	J-227	8	Ductile Iron	130	0.0	37.00	0.2400
47271	9	J-144	J-145	6	Ductile Iron	130	0.0	0.00	0.0000
47272	140	J-144	J-181	8	Ductile Iron	130	0.0	37.00	0.2400
47273	9	J-181	J-182	8	Ductile Iron	130	0.0	0.00	0.0000
47274	60	J-181	J-460	8	Ductile Iron	130	0.0	0.00	0.0000
47275	37	J-371	J-372	6	Ductile Iron	130	0.0	0.00	0.0000
47276	93	J-371	J-500	8	Ductile Iron	130	0.0	0.00	0.0000
47278	41	J-389	J-390	8	Ductile Iron	130	0.0	0.00	0.0000
47279	672	J-389	J-547	8	Ductile Iron	130	0.0	31.00	0.2000
47305	50	J-355	J-430	8	Ductile Iron	130	0.0	2.00	0.0100
47310	52	J-435	J-40	8	Ductile Iron	130	0.0	0.00	0.0000
47311	4	J-40	J-41	6	Ductile Iron	130	0.0	0.00	0.0000
47325	96	J-398	J-504	8	Ductile Iron	130	0.0	0.00	0.0000
47327	42	J-398	J-399	6	Ductile Iron	130	0.0	0.00	0.0000
48023	23	J-177	J-178	6	Ductile Iron	130	0.0	0.00	0.0000
48024	140	J-343	J-150	8	Ductile Iron	130	0.0	0.00	0.0000
48025	20	J-150	J-151	8	Ductile Iron	130	0.0	0.00	0.0000
48027	2	J-9	J-10	8	Ductile Iron	130	0.0	0.00	0.0000
48028	16	J-125	J-126	6	Ductile Iron	130	0.0	0.00	0.0000
48211	7	J-138	J-139	6	Ductile Iron	130	0.0	0.00	0.0000
48212	7	J-140	J-141	6	Ductile Iron	130	0.0	0.00	0.0000
48213	20	J-305	J-306	6	Ductile Iron	130	0.0	0.00	0.0000
55557	98	J-276	J-277	12	Ductile Iron	130	0.0	1.00	0.0000
55562	20	J-152	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
55563	19	J-142	J-143	6	Ductile Iron	130	0.0	0.00	0.0000
55564	50	J-260	J-194	8	Ductile Iron	130	0.0	0.00	0.0000
55565	18	J-137	J-138	8	Ductile Iron	130	0.0	0.00	0.0000
55569	26	J-204	J-132	8	Ductile Iron	130	0.0	0.00	0.0000
55570	17	J-131	J-132	8	Ductile Iron	130	0.0	0.00	0.0000
55571	28	J-209	J-210	6	Ductile Iron	130	0.0	0.00	0.0000
55572	26	J-202	J-203	8	Ductile Iron	130	0.0	0.00	0.0000
55574	55	J-597	J-268	8	Ductile Iron	130	0.0	0.00	0.0000
55575	26	J-195	J-196	8	Ductile Iron	130	0.0	0.00	0.0000
55577	9	J-55	J-56	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
55578	8	J-49	J-50	6	Ductile Iron	130	0.0	0.00	0.0000
55979	260	J-448	J-450	12	Ductile Iron	130	0.0	-1.00	0.0000
55980	56	J-450	J-451	8	Ductile Iron	130	0.0	0.00	0.0000
55981	56	J-448	J-449	8	Ductile Iron	130	0.0	0.00	0.0000
55982	8	J-134	J-135	6	Ductile Iron	130	0.0	0.00	0.0000
55983	258	J-543	J-453	12	Ductile Iron	130	0.0	-1.00	0.0000
55984	58	J-453	J-454	8	Ductile Iron	130	0.0	0.00	0.0000
55985	10	J-160	J-161	99	Ductile Iron	130	0.0	0.00	0.0000
55986	196	J-146	J-557	12	Ductile Iron	130	0.0	-1.00	0.0000
55987	9	J-146	J-147	6	Ductile Iron	130	0.0	0.00	0.0000
55988	63	J-469	J-470	8	Ductile Iron	130	0.0	0.00	0.0000
55989	352	J-597	J-315	12	Ductile Iron	130	0.0	1.00	0.0000
55990	63	J-315	J-466	8	Ductile Iron	130	0.0	0.00	0.0000
55991	10	J-150	J-151	6	Ductile Iron	130	0.0	0.00	0.0000
55992	69	J-276	J-375	12	Ductile Iron	130	0.0	0.00	0.0000
55993	16	J-276	J-277	16	Ductile Iron	130	0.0	4.00	0.0100
55994	510	J-276	J-623	16	Ductile Iron	130	0.0	-3.00	0.0000
56000	304	J-239	J-272	16	Ductile Iron	130	0.0	-3.00	0.0000
56001	67	J-272	J-232	12	Ductile Iron	130	0.0	0.00	0.0000
56003	332	J-235	J-255	16	Ductile Iron	130	0.0	-4.00	0.0100
56010	9	J-51	J-52	6	Ductile Iron	130	0.0	0.00	0.0000
56014	9	J-53	J-54	6	Ductile Iron	130	0.0	0.00	0.0000
56016	30	J-212	J-213	8	Ductile Iron	130	0.0	0.00	0.0000
56018	32	J-214	J-215	8	Ductile Iron	130	0.0	0.00	0.0000
56021	6	J-13	J-14	6	Ductile Iron	130	0.0	0.00	0.0000
56023	8	J-43	J-44	6	Ductile Iron	130	0.0	0.00	0.0000
56024	23	J-171	J-172	8	Ductile Iron	130	0.0	0.00	0.0000
56025	21	J-157	J-154	8	Ductile Iron	130	0.0	0.00	0.0000
56028	8	J-47	J-48	6	Ductile Iron	130	0.0	0.00	0.0000
60881	220	J-498	J-562	8	Ductile Iron	130	0.0	-8.00	0.0500
60885	31	J-340	J-341	6	Ductile Iron	130	0.0	0.00	0.0000
64961	16	J-271	J-272	6	Ductile Iron	130	0.0	0.00	0.0000
64963	6	J-123	J-124	99	Ductile Iron	130	0.0	-172.00	0.0100
64964	32	J-347	J-348	6	Ductile Iron	130	0.0	-2.00	0.0200
75508	481	J-262	J-613	6	Ductile Iron	130	0.0	1.00	0.0200
76924	6	J-125	J-126	6	Ductile Iron	130	0.0	0.00	0.0000
76925	34	J-356	J-357	6	Ductile Iron	130	0.0	3.00	0.0300
89634	50	J-431	J-432	6	Ductile Iron	130	0.0	0.00	0.0000
89638	55	J-298	J-444	16	Ductile Iron	130	0.0	4.00	0.0100
89640	53	J-442	J-443	6	Ductile Iron	130	0.0	-7.00	0.0800
89641	13	J-242	J-243	6	Ductile Iron	130	0.0	0.00	0.0000
89642	14	J-256	J-240	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
89643	14	J-254	J-255	6	Ductile Iron	130	0.0	0.00	0.0000
89644	32	J-349	J-350	16	Ductile Iron	130	0.0	-3.00	0.0100
89646	9	J-187	J-188	16	Ductile Iron	130	0.0	5.00	0.0100
90048	53	J-438	J-439	10	Ductile Iron	130	0.0	0.00	0.0000
96761	14	J-185	J-257	10	Ductile Iron	130	0.0	0.00	0.0000
96762	9	J-185	J-186	10	Ductile Iron	130	0.0	0.00	0.0000
98803	117	J-532	J-485	12	Ductile Iron	130	0.0	0.00	0.0000
98804	1,475	J-532	J-667	12	Ductile Iron	130	0.0	0.00	0.0000
98805	315	J-667	J-366	12	Ductile Iron	130	0.0	0.00	0.0000
98806	944	J-366	J-627	12	Ductile Iron	130	0.0	0.00	0.0000
98807	584	J-627	J-628	12	Ductile Iron	130	0.0	0.00	0.0000
99201	13	J-186	J-239	12	Ductile Iron	130	0.0	0.00	0.0000
99202	504	J-620	J-236	24	Ductile Iron	130	0.0	0.00	0.0000
99203	26	J-239	J-236	12	Ductile Iron	130	0.0	0.00	0.0000
99204	21	J-156	J-620	12	Ductile Iron	130	0.0	0.00	0.0000
99205	19	J-235	J-236	1	Ductile Iron	130	0.0	0.00	0.0000
105743	8	J-132	J-133	6	Ductile Iron	130	0.0	0.00	0.0000
105756	9	J-142	J-143	6	Ductile Iron	130	0.0	0.00	0.0000
105757	21	J-64	J-307	12	Ductile Iron	130	0.0	0.00	0.0000
105758	123	J-307	J-537	12	Ductile Iron	130	0.0	0.00	0.0000
105759	17	J-280	J-63	12	Ductile Iron	130	0.0	0.00	0.0000
105760	5	J-63	J-64	12	Ductile Iron	130	0.0	0.00	0.0000
105761	19	J-290	J-291	8	Ductile Iron	130	0.0	-2.00	0.0100
105762	61	J-462	J-463	8	Ductile Iron	130	0.0	0.00	0.0000
105763	198	J-463	J-535	8	Ductile Iron	130	0.0	0.00	0.0000
105765	120	J-535	J-164	8	Ductile Iron	130	0.0	0.00	0.0000
105766	8	J-164	J-165	6	Ductile Iron	130	0.0	0.00	0.0000
105767	349	J-164	J-596	8	Ductile Iron	130	0.0	0.00	0.0000
141981	27	J-330	J-290	8	Ductile Iron	130	0.0	-2.00	0.0100
141982	121	J-330	J-536	8	Ductile Iron	130	0.0	2.00	0.0100
141984	44	J-403	J-404	6	Ductile Iron	130	0.0	0.00	0.0000
141985	6	J-97	J-98	6	Ductile Iron	130	0.0	8.00	0.1000
141986	6	J-95	J-96	6	Ductile Iron	130	0.0	0.00	0.0000
141987	138	J-472	J-99	8	Ductile Iron	130	0.0	-1.00	0.0000
141988	11	J-217	J-218	6	Ductile Iron	130	0.0	-1.00	0.0100
141989	6	J-99	J-100	6	Ductile Iron	130	0.0	0.00	0.0000
141990	227	J-498	J-467	6	Ductile Iron	130	0.0	2.00	0.0200
141991	63	J-467	J-468	6	Ductile Iron	130	0.0	1.00	0.0100
141994	5	J-83	J-84	6	Ductile Iron	130	0.0	0.00	0.0000
141995	6	J-101	J-102	6	Ductile Iron	130	0.0	0.00	0.0000
144879	5	J-67	J-68	16	Ductile Iron	130	0.0	0.00	0.0000
158638	6	J-33	J-34	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
158639	43	J-244	J-245	6	Ductile Iron	130	0.0	0.00	0.0000
158640	35	J-224	J-225	8	Ductile Iron	130	0.0	0.00	0.0000
158649	26	J-193	J-194	8	Ductile Iron	130	0.0	0.00	0.0000
158650	65	J-140	J-193	8	Ductile Iron	130	0.0	0.00	0.0000
158651	18	J-139	J-140	8	Ductile Iron	130	0.0	0.00	0.0000
158652	20	J-154	J-155	8	Ductile Iron	130	0.0	0.00	0.0000
158653	25	J-191	J-192	6	Ductile Iron	130	0.0	0.00	0.0000
158654	148	J-155	J-200	8	Ductile Iron	130	0.0	0.00	0.0000
158655	26	J-200	J-201	8	Ductile Iron	130	0.0	0.00	0.0000
159024	35	J-226	J-227	8	Ductile Iron	130	0.0	0.00	0.0000
159026	11	J-85	J-86	6	Ductile Iron	130	0.0	0.00	0.0000
174392	80	J-491	J-492	8	Ductile Iron	130	0.0	0.00	0.0000
174802	41	J-395	J-396	4	Ductile Iron	130	0.0	0.00	0.0000
174803	27	J-155	J-327	4	Ductile Iron	130	0.0	0.00	0.0000
189468	7	J-148	J-149	6	Ductile Iron	130	0.0	0.00	0.0000
189469	131	J-279	J-130	8	Ductile Iron	130	0.0	0.00	0.0000
189470	6	J-130	J-131	8	Ductile Iron	130	0.0	0.00	0.0000
189472	197	J-559	J-437	8	Ductile Iron	130	0.0	-2.00	0.0100
189473	16	J-273	J-274	6	Ductile Iron	130	0.0	0.00	0.0000
189474	53	J-437	J-361	8	Ductile Iron	130	0.0	-2.00	0.0100
189475	36	J-361	J-362	8	Ductile Iron	130	0.0	-2.00	0.0100
189476	197	J-362	J-558	8	Ductile Iron	130	0.0	-5.00	0.0300
189477	6	J-91	J-92	4	Ductile Iron	130	0.0	0.00	0.0000
198398	147	J-417	J-286	8	Ductile Iron	130	0.0	1.00	0.0100
203870	6	J-2	J-19	16	Ductile Iron	130	0.0	-4.00	0.0100
203871	1	J-1	J-2	8	Ductile Iron	130	0.0	0.00	0.0000
213052	70	J-475	J-219	8	Ductile Iron	130	0.0	4.00	0.0200
213053	11	J-219	J-220	6	Ductile Iron	130	0.0	0.00	0.0000
213054	388	J-219	J-418	8	Ductile Iron	130	0.0	2.00	0.0200
213055	47	J-418	J-419	6	Ductile Iron	130	0.0	0.00	0.0000
225318	10	J-196	J-205	6	Ductile Iron	130	0.0	-6.00	0.0700
228582	4	J-34	J-35	6	Ductile Iron	130	0.0	5.00	0.0500
228583	329	J-594	J-34	6	Ductile Iron	130	0.0	5.00	0.0500
229343	12	J-12	J-234	8	Ductile Iron	130	0.0	13.00	0.0800
229344	4	J-28	J-29	6	Ductile Iron	130	0.0	22.00	0.2500
229345	6	J-29	J-10	6	Ductile Iron	130	0.0	22.00	0.2500
229346	2	J-10	J-11	8	Ductile Iron	130	0.0	13.00	0.0800
229347	2	J-11	J-12	8	Ductile Iron	130	0.0	13.00	0.0800
239091	40	J-232	J-233	12	Ductile Iron	130	0.0	0.00	0.0000
239094	15	J-243	J-263	6	Ductile Iron	130	0.0	0.00	0.0000
239098	13	J-240	J-241	6	Ductile Iron	130	0.0	0.00	0.0000
239099	20	J-255	J-299	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
239483	168	J-552	J-117	8	Ductile Iron	130	0.0	1.00	0.0100
239484	116	J-471	J-511	8	Ductile Iron	130	0.0	-2.00	0.0100
239485	44	J-405	J-406	8	Ductile Iron	130	0.0	1.00	0.0100
239486	312	J-587	J-591	6	Ductile Iron	130	0.0	8.00	0.0900
239487	158	J-536	J-404	8	Ductile Iron	130	0.0	2.00	0.0100
239883	11	J-221	J-222	6	Ductile Iron	130	0.0	13.00	0.1500
239884	557	J-573	J-617	8	Ductile Iron	130	0.0	-12.00	0.0800
239886	455	J-610	J-394	8	Ductile Iron	130	0.0	-14.00	0.0900
239888	37	J-363	J-364	12	Ductile Iron	130	0.0	-24.00	0.0700
240694	84	J-406	J-407	8	Ductile Iron	130	0.0	1.00	0.0100
240695	46	J-117	J-417	8	Ductile Iron	130	0.0	1.00	0.0100
240696	69	J-286	J-471	8	Ductile Iron	130	0.0	-2.00	0.0100
240697	441	J-483	J-107	6	Ductile Iron	130	0.0	-1.00	0.0100
240699	507	J-621	J-622	6	Ductile Iron	130	0.0	-15.00	0.1700
240700	70	J-472	J-473	8	Ductile Iron	130	0.0	-6.00	0.0400
240701	101	J-99	J-217	8	Ductile Iron	130	0.0	-1.00	0.0000
240702	199	J-526	J-475	16	Ductile Iron	130	0.0	-27.00	0.0400
240703	164	J-475	J-537	16	Ductile Iron	130	0.0	-30.00	0.0500
241094	155	J-547	J-477	8	Ductile Iron	130	0.0	22.00	0.1400
241095	254	J-572	J-79	6	Ductile Iron	130	0.0	27.00	0.3100
241097	229	J-565	J-106	6	Ductile Iron	130	0.0	8.00	0.0900
241098	453	J-167	J-609	6	Ductile Iron	130	0.0	2.00	0.0200
241100	206	J-359	J-560	6	Ductile Iron	130	0.0	2.00	0.0200
241101	204	J-560	J-204	6	Ductile Iron	130	0.0	0.00	0.0000
241104	61	J-461	J-371	8	Ductile Iron	130	0.0	0.00	0.0000
241105	54	J-371	J-436	8	Ductile Iron	130	0.0	0.00	0.0000
241106	102	J-181	J-461	8	Ductile Iron	130	0.0	37.00	0.2400
241109	49	J-227	J-144	8	Ductile Iron	130	0.0	37.00	0.2400
241111	44	J-246	J-247	8	Ductile Iron	130	0.0	37.00	0.2400
241115	849	J-52	J-88	6	Ductile Iron	130	0.0	4.00	0.0400
241117	572	J-632	J-633	6	Ductile Iron	130	0.0	7.00	0.0700
241118	579	J-632	J-213	6	Ductile Iron	130	0.0	-12.00	0.1400
241121	22	J-314	J-315	8	Ductile Iron	130	0.0	0.00	0.0000
241122	226	J-557	J-469	12	Ductile Iron	130	0.0	-1.00	0.0000
241123	116	J-453	J-146	12	Ductile Iron	130	0.0	-1.00	0.0000
241127	443	J-444	J-608	16	Ductile Iron	130	0.0	4.00	0.0100
241128	303	J-78	J-442	6	Ductile Iron	130	0.0	-7.00	0.0800
241131	268	J-193	J-580	16	Ductile Iron	130	0.0	-3.00	0.0100
241136	592	J-585	J-27	6	Ductile Iron	130	0.0	0.00	0.0000
241137	269	J-446	J-385	16	Ductile Iron	130	0.0	-5.00	0.0100
241139	125	J-533	J-534	6	Ductile Iron	130	0.0	2.00	0.0200
241142	45	J-400	J-416	16	Ductile Iron	130	0.0	-31.00	0.0500



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
241145	265	J-519	J-333	16	Ductile Iron	130	0.0	-69.00	0.1100
241146	323	J-370	J-397	16	Ductile Iron	130	0.0	-77.00	0.1200
241147	42	J-397	J-285	16	Ductile Iron	130	0.0	-77.00	0.1200
241148	465	J-285	J-439	16	Ductile Iron	130	0.0	-102.00	0.1600
241494	292	J-432	J-546	16	Ductile Iron	130	0.0	-102.00	0.1600
241495	150	J-546	J-323	16	Ductile Iron	130	0.0	-102.00	0.1600
241496	69	J-323	J-1	16	Ductile Iron	130	0.0	-102.00	0.1600
241497	32	J-1	J-346	16	Ductile Iron	130	0.0	-102.00	0.1600
241498	99	J-346	J-414	16	Ductile Iron	130	0.0	-122.00	0.1900
241499	45	J-414	J-415	16	Ductile Iron	130	0.0	-122.00	0.1900
241500	94	J-501	J-502	6	Ductile Iron	130	0.0	-4.00	0.0500
241502	487	J-501	J-614	6	Ductile Iron	130	0.0	7.00	0.0800
242703	326	J-592	J-593	6	Ductile Iron	130	0.0	-4.00	0.0400
243096	18	J-281	J-16	16	Ductile Iron	130	0.0	1.00	0.0000
243097	33	J-355	J-281	16	Ductile Iron	130	0.0	-7.00	0.0100
243100	127	J-504	J-233	16	Ductile Iron	130	0.0	27.00	0.0400
243101	392	J-506	J-562	16	Ductile Iron	130	0.0	47.00	0.0700
243898	52	J-434	J-38	8	Ductile Iron	130	0.0	0.00	0.0000
243899	4	J-38	J-39	6	Ductile Iron	130	0.0	0.00	0.0000
243900	60	J-457	J-42	8	Ductile Iron	130	0.0	0.00	0.0000
243901	4	J-42	J-43	6	Ductile Iron	130	0.0	0.00	0.0000
247576	10	J-13	J-214	6	Ductile Iron	130	0.0	-7.00	0.0800
247577	2	J-13	J-14	6	Ductile Iron	130	0.0	0.00	0.0000
247937	3	J-14	J-19	6	Ductile Iron	130	0.0	0.00	0.0000
P-1	205	J-643	J-380	6	Ductile Iron	130	0.0	36.00	0.4100
P-2	520	J-380	J-381	6	Ductile Iron	130	0.0	15.00	0.1700
P-3	283	J-381	J-382	6	Ductile Iron	130	0.0	12.00	0.1300
P-4	531	J-382	J-383	6	Ductile Iron	130	0.0	10.00	0.1200
P-5	423	J-383	J-384	6	Ductile Iron	130	0.0	-11.00	0.1200
P-6	283	J-384	J-385	6	Ductile Iron	130	0.0	-13.00	0.1500
P-7	434	J-385	J-380	6	Ductile Iron	130	0.0	-16.00	0.1900
P-8	679	J-647	J-386	6	Ductile Iron	130	0.0	-9.00	0.1000
P-9	302	J-386	J-656	6	Ductile Iron	130	0.0	5.00	0.0600
P-10	155	J-383	J-386	6	Ductile Iron	130	0.0	16.00	0.1900
P-11	501	J-593	J-387	6	Ductile Iron	130	0.0	-4.00	0.0400
P-12	462	J-387	J-441	6	Ductile Iron	130	0.0	-6.00	0.0700
P-13	472	J-658	J-388	6	Ductile Iron	130	0.0	-5.00	0.0600
P-14	515	J-388	J-588	6	Ductile Iron	130	0.0	-11.00	0.1300
P-15	655	J-363	J-389	6	Ductile Iron	130	0.0	23.00	0.2600
P-16	635	J-389	J-588	6	Ductile Iron	130	0.0	20.00	0.2200
P-17	414	J-588	J-391	6	Ductile Iron	130	0.0	0.00	0.0000
P-19	630	J-664	J-392	6	Ductile Iron	130	0.0	24.00	0.2700

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-20	660	J-392	J-665	6	Ductile Iron	130	0.0	19.00	0.2100
P-22	632	J-394	J-384	6	Ductile Iron	130	0.0	-24.00	0.2700
P-25	931	J-222	J-397	6	Ductile Iron	130	0.0	1.00	0.0100
P-26	265	J-397	J-621	6	Ductile Iron	130	0.0	-7.00	0.0800
P-28	540	J-398	J-232	6	Ductile Iron	130	0.0	-28.00	0.3200
P-31	31	R-2	PMP-2	99	Ductile Iron	130	0.0	168.00	0.0100
P-32	42	PMP-2	J-116	99	Ductile Iron	130	0.0	168.00	0.0100
P-34	72	R-3	PMP-3	99	Ductile Iron	130	0.0	0.00	0.0000
P-35	80	PMP-3	J-161	99	Ductile Iron	130	0.0	0.00	0.0000
P-36	26	R-1	PMP-1	99	Ductile Iron	130	0.0	172.00	0.0100
P-37	25	PMP-1	J-124	99	Ductile Iron	130	0.0	172.00	0.0100
P-38	45	J-350	J-401	16	Ductile Iron	130	0.0	-3.00	0.0100
P-39	18	J-401	J-188	16	Ductile Iron	130	0.0	-5.00	0.0100
P-41	336	J-401	J-673	6	Ductile Iron	130	0.0	2.00	0.0200
P-44	1	J-321	J-365	12	Ductile Iron	130	0.0	-31.00	0.0900
P-47	379	J-237	J-235	16	Ductile Iron	130	0.0	-4.00	0.0100
P-49	182	J-250	J-237	16	Ductile Iron	130	0.0	-4.00	0.0100
P-50	242	J-272	J-229	16	Ductile Iron	130	0.0	-4.00	0.0100
P-51	133	J-229	J-250	16	Ductile Iron	130	0.0	-4.00	0.0100
P-53	186	J-242	J-239	16	Ductile Iron	130	0.0	-3.00	0.0000
P-54	200	J-623	J-129	16	Ductile Iron	130	0.0	-3.00	0.0000
P-55	115	J-129	J-242	16	Ductile Iron	130	0.0	-3.00	0.0000
P-56	138	J-15	J-332	16	Ductile Iron	130	0.0	4.00	0.0100
P-58	5	J-332	J-284	16	Ductile Iron	130	0.0	4.00	0.0100
P-59	290	J-284	J-17	16	Ductile Iron	130	0.0	4.00	0.0100
P-62	5	J-287	J-336	16	Ductile Iron	130	0.0	-4.00	0.0100
P-63	658	J-336	J-2	16	Ductile Iron	130	0.0	-4.00	0.0100
P-65	11	J-365	J-370	16	Ductile Iron	130	0.0	-77.00	0.1200
P-74	54	J-326	J-430	6	Ductile Iron	130	0.0	1.00	0.0100
P-75	644	J-430	J-367	6	Ductile Iron	130	0.0	3.00	0.0300
P-78	4	J-15	J-94	16	Ductile Iron	130	0.0	0.00	0.0000
P-85	17	J-378	J-325	12	Ductile Iron	130	0.0	-41.00	0.1200
P-87	1	J-321	J-365	8	Ductile Iron	130	0.0	-11.00	0.0700
P-90	70	J-296	J-322	12	Ductile Iron	130	0.0	-4.00	0.0100
P-92	187	J-164	J-293	12	Ductile Iron	130	0.0	-41.00	0.1200
P-93	49	J-293	J-378	12	Ductile Iron	130	0.0	-41.00	0.1200
P-96	512	J-626	J-321	30	Ductile Iron	130	0.0	80.00	0.0400
P-97	39	J-321	J-67	30	Ductile Iron	130	0.0	75.00	0.0300
P-98	18	J-484	J-292	16	Ductile Iron	130	0.0	-75.00	0.1200
P-99	62	J-292	J-382	16	Ductile Iron	130	0.0	-75.00	0.1200
P-102	583	J-391	J-665	6	Ductile Iron	130	0.0	-6.00	0.0600
P-103	326	J-665	J-657	6	Ductile Iron	130	0.0	8.00	0.0900



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-106	503	J-447	J-630	6	Ductile Iron	130	0.0	5.00	0.0600
P-107	30	J-630	J-625	6	Ductile Iron	130	0.0	0.00	0.0000
P-108	12	J-185	J-628	8	Ductile Iron	130	0.0	0.00	0.0000
P-109	3	J-628	J-266	8	Ductile Iron	130	0.0	0.00	0.0000
P-110	11	J-605	J-138	8	Ductile Iron	130	0.0	-5.00	0.0300
P-111	409	J-138	J-606	8	Ductile Iron	130	0.0	-5.00	0.0300
P-112	641	J-65	J-590	6	Ductile Iron	130	0.0	12.00	0.1300
P-113	297	J-590	J-52	6	Ductile Iron	130	0.0	8.00	0.0900
P-115	24	J-372	J-312	8	Ductile Iron	130	0.0	0.00	0.0000
P-117	6	J-343	J-340	8	Ductile Iron	130	0.0	0.00	0.0000
P-121	46	J-291	J-583	16	Ductile Iron	130	0.0	-27.00	0.0400
P-123	26	J-568	J-581	16	Ductile Iron	130	0.0	39.00	0.0600
P-124	206	J-638	J-578	16	Ductile Iron	130	0.0	-74.00	0.1200
P-125	433	J-578	J-20	16	Ductile Iron	130	0.0	-75.00	0.1200
P-126	56	J-476	J-572	6	Ductile Iron	130	0.0	5.00	0.0500
P-127	14	J-572	J-477	6	Ductile Iron	130	0.0	-22.00	0.2500
P-128	5	J-322	J-355	12	Ductile Iron	130	0.0	-4.00	0.0100
P-130	237	J-416	J-391	16	Ductile Iron	130	0.0	-31.00	0.0500
P-131	10	J-391	J-571	16	Ductile Iron	130	0.0	-31.00	0.0500
P-133	45	J-324	J-65	12	Ductile Iron	130	0.0	-41.00	0.1200
P-134	561	J-562	J-6	16	Ductile Iron	130	0.0	39.00	0.0600
P-135	4	J-6	J-568	16	Ductile Iron	130	0.0	39.00	0.0600
P-146	662	J-616	J-37	6	Ductile Iron	130	0.0	-8.00	0.0900
P-147	104	J-37	J-651	6	Ductile Iron	130	0.0	-10.00	0.1200
P-148	17	J-393	J-339	8	Ductile Iron	130	0.0	14.00	0.0900
P-149	24	J-339	J-394	8	Ductile Iron	130	0.0	14.00	0.0900
P-150	73	J-633	J-190	6	Ductile Iron	130	0.0	4.00	0.0500
P-151	617	J-190	J-648	6	Ductile Iron	130	0.0	2.00	0.0200
P-152	52	J-32	J-195	6	Ductile Iron	130	0.0	-6.00	0.0700
P-154	92	J-205	J-409	8	Ductile Iron	130	0.0	0.00	0.0000
P-155	23	J-409	J-528	8	Ductile Iron	130	0.0	0.00	0.0000
P-156	720	J-649	J-143	12	Ductile Iron	130	0.0	0.00	0.0000
P-157	2	J-143	J-280	12	Ductile Iron	130	0.0	0.00	0.0000
P-158	545	J-629	J-306	6	Ductile Iron	130	0.0	-3.00	0.0300
P-159	18	J-306	J-630	6	Ductile Iron	130	0.0	-3.00	0.0300
P-163	287	J-395	J-661	30	Ductile Iron	130	0.0	80.00	0.0400
P-164	82	J-619	J-254	16	Ductile Iron	130	0.0	-3.00	0.0100
P-165	465	J-254	J-349	16	Ductile Iron	130	0.0	-3.00	0.0100
P-166	207	J-617	J-216	8	Ductile Iron	130	0.0	-14.00	0.0900
P-167	293	J-216	J-618	8	Ductile Iron	130	0.0	-14.00	0.0900
P-170	6	J-291	J-21	12	Ductile Iron	130	0.0	-41.00	0.1200
P-171	61	J-21	J-324	12	Ductile Iron	130	0.0	-41.00	0.1200



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-172	281	J-524	J-252	16	Ductile Iron	130	0.0	-44.00	0.0700
P-173	90	J-252	J-599	16	Ductile Iron	130	0.0	-44.00	0.0700
P-175	137	J-173	J-598	16	Ductile Iron	130	0.0	-44.00	0.0700
P-176	44	J-597	J-49	12	Ductile Iron	130	0.0	-1.00	0.0000
P-180	264	J-132	J-195	12	Ductile Iron	130	0.0	0.00	0.0000
P-181	72	J-195	J-597	12	Ductile Iron	130	0.0	0.00	0.0000
P-184	177	J-10	J-75	6	Ductile Iron	130	0.0	9.00	0.1100
P-185	159	J-75	J-594	6	Ductile Iron	130	0.0	5.00	0.0500
P-186	47	J-334	J-377	6	Ductile Iron	130	0.0	6.00	0.0700
P-187	8	J-377	J-447	6	Ductile Iron	130	0.0	6.00	0.0700
P-188	16	J-422	J-85	6	Ductile Iron	130	0.0	20.00	0.2300
P-189	733	J-85	J-65	6	Ductile Iron	130	0.0	17.00	0.1900
P-192	208	J-277	J-212	12	Ductile Iron	130	0.0	0.00	0.0000
P-194	136	J-172	J-177	8	Ductile Iron	130	0.0	0.00	0.0000
P-195	25	J-177	J-343	8	Ductile Iron	130	0.0	0.00	0.0000
P-198	42	J-582	J-356	8	Ductile Iron	130	0.0	37.00	0.2400
P-199	270	J-356	J-389	8	Ductile Iron	130	0.0	34.00	0.2200
P-200	111	J-579	J-491	12	Ductile Iron	130	0.0	-41.00	0.1200
P-201	157	J-491	J-487	12	Ductile Iron	130	0.0	-41.00	0.1200
P-202	434	J-129	J-198	6	Ductile Iron	130	0.0	-5.00	0.0500
P-203	19	J-198	J-561	6	Ductile Iron	130	0.0	-5.00	0.0500
P-204	99	J-606	J-141	8	Ductile Iron	130	0.0	-6.00	0.0400
P-205	334	J-141	J-547	8	Ductile Iron	130	0.0	-7.00	0.0500
P-206	433	J-608	J-443	16	Ductile Iron	130	0.0	4.00	0.0100
P-207	44	J-443	J-563	16	Ductile Iron	130	0.0	-3.00	0.0100
P-210	56	J-498	J-340	8	Ductile Iron	130	0.0	6.00	0.0400
P-211	30	J-340	J-473	8	Ductile Iron	130	0.0	6.00	0.0400
P-212	7	J-468	J-101	6	Ductile Iron	130	0.0	1.00	0.0100
P-213	84	J-101	J-345	6	Ductile Iron	130	0.0	1.00	0.0100
P-214	16	J-218	J-83	6	Ductile Iron	130	0.0	-1.00	0.0100
P-215	16	J-83	J-345	6	Ductile Iron	130	0.0	-1.00	0.0100
P-216	25	J-404	J-97	8	Ductile Iron	130	0.0	2.00	0.0100
P-218	32	J-97	J-95	8	Ductile Iron	130	0.0	-6.00	0.0400
P-219	117	J-95	J-472	8	Ductile Iron	130	0.0	-6.00	0.0400
P-220	18	J-415	J-115	16	Ductile Iron	130	0.0	-122.00	0.1900
P-221	79	J-115	J-506	16	Ductile Iron	130	0.0	47.00	0.0700
P-222	125	J-450	J-160	12	Ductile Iron	130	0.0	-1.00	0.0000
P-223	13	J-160	J-543	12	Ductile Iron	130	0.0	-1.00	0.0000
P-224	10	J-383	J-123	8	Ductile Iron	130	0.0	-149.00	0.9500
P-225	30	J-123	J-384	8	Ductile Iron	130	0.0	24.00	0.1500
P-226	34	J-212	J-331	12	Ductile Iron	130	0.0	0.00	0.0000
P-228	176	J-331	J-214	12	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-230	85	J-214	J-13	12	Ductile Iron	130	0.0	0.00	0.0000
P-231	168	J-13	J-375	12	Ductile Iron	130	0.0	0.00	0.0000
P-235	55	J-301	J-321	12	Ductile Iron	130	0.0	-4.00	0.0100
P-236	562	J-49	J-55	12	Ductile Iron	130	0.0	-1.00	0.0000
P-237	37	J-55	J-277	12	Ductile Iron	130	0.0	-1.00	0.0000
P-240	321	J-282	J-53	12	Ductile Iron	130	0.0	1.00	0.0000
P-241	454	J-53	J-276	12	Ductile Iron	130	0.0	1.00	0.0000
P-243	35	J-81	J-165	12	Ductile Iron	130	0.0	-4.00	0.0100
P-245	153	J-69	J-349	12	Ductile Iron	130	0.0	-4.00	0.0100
P-246	80	J-349	J-370	12	Ductile Iron	130	0.0	-4.00	0.0100
P-247	91	J-370	J-81	12	Ductile Iron	130	0.0	-4.00	0.0100
P-252	80	J-326	J-61	8	Ductile Iron	130	0.0	37.00	0.2400
P-253	27	J-61	J-512	8	Ductile Iron	130	0.0	37.00	0.2400
P-254	46	J-231	J-327	16	Ductile Iron	130	0.0	-4.00	0.0100
P-255	18	J-327	J-189	16	Ductile Iron	130	0.0	-4.00	0.0100
P-256	3	J-518	J-513	16	Ductile Iron	130	0.0	-24.00	0.0400
P-257	228	J-513	J-291	16	Ductile Iron	130	0.0	-24.00	0.0400
P-259	121	J-197	J-282	12	Ductile Iron	130	0.0	1.00	0.0000
P-261	19	J-375	J-226	8	Ductile Iron	130	0.0	0.00	0.0000
P-262	34	J-227	J-86	8	Ductile Iron	130	0.0	0.00	0.0000
P-266	22	J-478	J-295	12	Ductile Iron	130	0.0	4.00	0.0100
P-267	6	J-295	J-297	12	Ductile Iron	130	0.0	3.00	0.0100
P-268	60	J-201	J-191	8	Ductile Iron	130	0.0	0.00	0.0000
P-269	237	J-191	J-139	8	Ductile Iron	130	0.0	0.00	0.0000
P-277	58	J-244	J-224	8	Ductile Iron	130	0.0	0.00	0.0000
P-278	29	J-225	J-367	8	Ductile Iron	130	0.0	0.00	0.0000
P-279	23	J-367	J-262	8	Ductile Iron	130	0.0	0.00	0.0000
P-280	340	J-86	J-33	8	Ductile Iron	130	0.0	0.00	0.0000
P-281	110	J-33	J-244	8	Ductile Iron	130	0.0	0.00	0.0000
P-283	156	J-209	J-132	12	Ductile Iron	130	0.0	0.00	0.0000
P-284	140	J-367	J-202	12	Ductile Iron	130	0.0	0.00	0.0000
P-285	45	J-202	J-209	12	Ductile Iron	130	0.0	0.00	0.0000
P-286	201	J-297	J-459	12	Ductile Iron	130	0.0	2.00	0.0000
P-288	16	J-459	J-413	12	Ductile Iron	130	0.0	2.00	0.0000
P-289	4	J-413	J-411	12	Ductile Iron	130	0.0	0.00	0.0000
P-290	95	J-233	J-457	16	Ductile Iron	130	0.0	-1.00	0.0000
P-291	195	J-457	J-261	16	Ductile Iron	130	0.0	-1.00	0.0000
P-292	38	J-421	J-456	16	Ductile Iron	130	0.0	-69.00	0.1100
P-293	69	J-456	J-519	16	Ductile Iron	130	0.0	-69.00	0.1100
P-294	36	J-333	J-373	16	Ductile Iron	130	0.0	-75.00	0.1200
P-295	875	J-373	J-365	16	Ductile Iron	130	0.0	-75.00	0.1200
P-300	190	J-261	J-434	16	Ductile Iron	130	0.0	-5.00	0.0100

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-301	77	J-434	J-496	16	Ductile Iron	130	0.0	-5.00	0.0100
P-302	20	J-187	J-428	16	Ductile Iron	130	0.0	-5.00	0.0100
P-303	40	J-428	J-446	16	Ductile Iron	130	0.0	-5.00	0.0100
P-304	310	J-571	J-423	16	Ductile Iron	130	0.0	-31.00	0.0500
P-309	214	J-270	J-373	12	Ductile Iron	130	0.0	0.00	0.0000
P-310	32	J-423	J-387	16	Ductile Iron	130	0.0	-31.00	0.0500
P-311	23	J-387	J-426	16	Ductile Iron	130	0.0	-31.00	0.0500
P-312	184	J-151	J-125	8	Ductile Iron	130	0.0	0.00	0.0000
P-314	65	J-157	J-171	12	Ductile Iron	130	0.0	0.00	0.0000
P-315	137	J-171	J-372	12	Ductile Iron	130	0.0	0.00	0.0000
P-316	16	J-153	J-143	12	Ductile Iron	130	0.0	0.00	0.0000
P-317	32	J-143	J-156	12	Ductile Iron	130	0.0	0.00	0.0000
P-318	100	J-353	J-101	12	Ductile Iron	130	0.0	-4.00	0.0100
P-319	149	J-101	J-301	12	Ductile Iron	130	0.0	-4.00	0.0100
P-330	274	J-272	J-181	12	Ductile Iron	130	0.0	1.00	0.0000
P-332	80	J-181	J-51	12	Ductile Iron	130	0.0	1.00	0.0000
P-333	67	J-51	J-197	12	Ductile Iron	130	0.0	1.00	0.0000
P-334	33	J-464	J-154	30	Ductile Iron	130	0.0	80.00	0.0400
P-336	10	J-154	J-152	30	Ductile Iron	130	0.0	80.00	0.0400
P-337	708	J-152	J-395	30	Ductile Iron	130	0.0	80.00	0.0400
P-338	154	J-363	J-73	12	Ductile Iron	130	0.0	-4.00	0.0100
P-339	246	J-73	J-168	12	Ductile Iron	130	0.0	-4.00	0.0100
P-340	89	J-156	J-137	12	Ductile Iron	130	0.0	0.00	0.0000
P-341	185	J-137	J-367	12	Ductile Iron	130	0.0	0.00	0.0000
P-342	51	J-365	J-71	12	Ductile Iron	130	0.0	-41.00	0.1200
P-343	145	J-71	J-297	12	Ductile Iron	130	0.0	-41.00	0.1200
P-348	5	J-223	J-106	12	Ductile Iron	130	0.0	-4.00	0.0100
P-350	10	J-106	J-67	12	Ductile Iron	130	0.0	-4.00	0.0100
P-351	263	J-67	J-69	12	Ductile Iron	130	0.0	-4.00	0.0100
P-352	15	J-277	J-282	16	Ductile Iron	130	0.0	4.00	0.0100
P-353	5	J-282	J-298	16	Ductile Iron	130	0.0	4.00	0.0100
P-354	72	J-276	J-134	12	Ductile Iron	130	0.0	-1.00	0.0000
P-355	21	J-134	J-448	12	Ductile Iron	130	0.0	-1.00	0.0000
P-357	88	J-273	J-559	8	Ductile Iron	130	0.0	-2.00	0.0100
P-358	583	J-364	J-271	12	Ductile Iron	130	0.0	-24.00	0.0700
P-360	7	J-558	J-264	8	Ductile Iron	130	0.0	-5.00	0.0300
P-362	73	J-563	J-242	16	Ductile Iron	130	0.0	-3.00	0.0100
P-363	149	J-242	J-193	16	Ductile Iron	130	0.0	-3.00	0.0100
P-364	173	J-607	J-259	16	Ductile Iron	130	0.0	-44.00	0.0700
P-365	180	J-259	J-173	16	Ductile Iron	130	0.0	-44.00	0.0700
P-366	82	J-580	J-256	16	Ductile Iron	130	0.0	-3.00	0.0100
P-367	418	J-256	J-619	16	Ductile Iron	130	0.0	-3.00	0.0100



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-368	4	J-24	J-7	16	Ductile Iron	130	0.0	-4.00	0.0100
P-369	20	J-7	J-120	16	Ductile Iron	130	0.0	-4.00	0.0100
P-370	49	J-355	J-77	12	Ductile Iron	130	0.0	-4.00	0.0100
P-371	186	J-77	J-353	12	Ductile Iron	130	0.0	-4.00	0.0100
P-372	155	J-375	J-43	12	Ductile Iron	130	0.0	0.00	0.0000
P-373	119	J-43	J-157	12	Ductile Iron	130	0.0	0.00	0.0000
P-374	56	J-325	J-63	12	Ductile Iron	130	0.0	-41.00	0.1200
P-375	392	J-63	J-291	12	Ductile Iron	130	0.0	-41.00	0.1200
P-376	22	J-402	J-200	8	Ductile Iron	130	0.0	-8.00	0.0500
P-377	1,316	J-200	J-516	8	Ductile Iron	130	0.0	-8.00	0.0500
P-378	69	J-372	J-47	12	Ductile Iron	130	0.0	0.00	0.0000
P-379	87	J-47	J-270	12	Ductile Iron	130	0.0	0.00	0.0000
P-380	207	J-487	J-183	12	Ductile Iron	130	0.0	-41.00	0.1200
P-381	301	J-183	J-489	12	Ductile Iron	130	0.0	-44.00	0.1200
P-382	731	J-213	J-180	6	Ductile Iron	130	0.0	-16.00	0.1800
P-383	19	J-180	J-427	6	Ductile Iron	130	0.0	-20.00	0.2300
P-384	19	J-315	J-150	12	Ductile Iron	130	0.0	1.00	0.0000
P-385	164	J-150	J-469	12	Ductile Iron	130	0.0	1.00	0.0000
P-386	200	J-121	J-5	16	Ductile Iron	130	0.0	-4.00	0.0100
P-387	399	J-5	J-287	16	Ductile Iron	130	0.0	-4.00	0.0100
P-388	6	J-278	J-148	8	Ductile Iron	130	0.0	0.00	0.0000
P-389	11	J-148	J-279	8	Ductile Iron	130	0.0	0.00	0.0000
P-390	52	J-131	J-91	8	Ductile Iron	130	0.0	0.00	0.0000
P-391	77	J-91	J-273	8	Ductile Iron	130	0.0	0.00	0.0000
P-392	213	J-662	J-133	12	Ductile Iron	130	0.0	0.00	0.0000
P-393	833	J-133	J-649	12	Ductile Iron	130	0.0	0.00	0.0000
P-394	146	J-461	J-125	8	Ductile Iron	130	0.0	37.00	0.2400
P-395	128	J-125	J-582	8	Ductile Iron	130	0.0	37.00	0.2400
P-396	341	J-125	J-9	8	Ductile Iron	130	0.0	0.00	0.0000
P-397	20	J-9	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
P-398	23	J-425	J-82	6	Ductile Iron	130	0.0	-8.00	0.1000
P-399	26	J-82	J-386	6	Ductile Iron	130	0.0	-8.00	0.1000
P-400	257	J-489	J-73	12	Ductile Iron	130	0.0	-44.00	0.1200
P-401	74	J-73	J-531	12	Ductile Iron	130	0.0	-44.00	0.1200
P-402	8	J-615	J-57	6	Ductile Iron	130	0.0	0.00	0.0000
P-403	489	J-57	J-616	6	Ductile Iron	130	0.0	0.00	0.0000
P-404	581	J-651	J-31	6	Ductile Iron	130	0.0	-13.00	0.1500
P-405	643	J-31	J-520	6	Ductile Iron	130	0.0	-18.00	0.2000
P-406	88	J-520	J-25	6	Ductile Iron	130	0.0	-22.00	0.2500
P-407	24	J-25	J-401	6	Ductile Iron	130	0.0	-22.00	0.2500
P-410	91	J-247	J-91	8	Ductile Iron	130	0.0	37.00	0.2400
P-411	62	J-91	J-326	8	Ductile Iron	130	0.0	37.00	0.2400



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-412	2	J-600	J-284	6	Ductile Iron	130	0.0	-4.00	0.0400
P-414	2	J-284	J-600	6	Ductile Iron	130	0.0	4.00	0.0400
P-415	372	J-600	J-441	6	Ductile Iron	130	0.0	6.00	0.0700
P-416	822	J-614	J-284	6	Ductile Iron	130	0.0	7.00	0.0700
P-417	2	J-284	J-652	6	Ductile Iron	130	0.0	0.00	0.0000
P-418	47	J-263	J-24	16	Ductile Iron	130	0.0	0.00	0.0000
P-419	5	J-24	J-254	16	Ductile Iron	130	0.0	4.00	0.0100
P-435	17	J-400	J-534	6	Ductile Iron	130	0.0	18.00	0.2000
P-437	1	J-534	J-639	6	Ductile Iron	130	0.0	19.00	0.2200
P-438	27	J-639	J-401	6	Ductile Iron	130	0.0	22.00	0.2500
P-441	17	J-426	J-640	6	Ductile Iron	130	0.0	18.00	0.2100
P-443	1	J-640	J-641	6	Ductile Iron	130	0.0	16.00	0.1800
P-444	32	J-641	J-427	6	Ductile Iron	130	0.0	20.00	0.2300
P-445	14	J-421	J-642	6	Ductile Iron	130	0.0	20.00	0.2300
P-447	1	J-642	J-592	6	Ductile Iron	130	0.0	16.00	0.1800
P-448	34	J-592	J-422	6	Ductile Iron	130	0.0	20.00	0.2300
P-449	17	J-385	J-673	6	Ductile Iron	130	0.0	9.00	0.1000
P-451	1	J-673	J-624	6	Ductile Iron	130	0.0	10.00	0.1200
P-452	24	J-624	J-386	6	Ductile Iron	130	0.0	8.00	0.1000
P-453	24	J-321	J-69	12	Ductile Iron	130	0.0	4.00	0.0100
P-454	5	J-69	J-322	12	Ductile Iron	130	0.0	4.00	0.0100
P-457	90	J-581	J-4	16	Ductile Iron	130	0.0	36.00	0.0600
P-459	269	J-465	J-383	12	Ductile Iron	130	0.0	-93.00	0.2600
P-460	341	J-383	J-348	12	Ductile Iron	130	0.0	55.00	0.1600
P-462	69	J-271	J-404	12	Ductile Iron	130	0.0	-28.00	0.0800
P-463	312	J-404	J-664	12	Ductile Iron	130	0.0	-28.00	0.0800
P-464	82	J-4	J-405	16	Ductile Iron	130	0.0	30.00	0.0500
P-465	98	J-405	J-435	16	Ductile Iron	130	0.0	30.00	0.0500
P-475	22	J-20	J-408	16	Ductile Iron	130	0.0	-75.00	0.1200
P-476	601	J-408	J-635	16	Ductile Iron	130	0.0	-75.00	0.1200
P-483	52	J-136	J-412	6	Ductile Iron	130	0.0	22.00	0.2500
P-484	372	J-412	J-565	6	Ductile Iron	130	0.0	22.00	0.2500
P-487	20	J-264	J-414	8	Ductile Iron	130	0.0	-7.00	0.0500
P-488	218	J-414	J-234	8	Ductile Iron	130	0.0	-7.00	0.0500
P-496	136	J-664	J-421	12	Ductile Iron	130	0.0	-54.00	0.1500
P-497	191	J-421	J-348	12	Ductile Iron	130	0.0	-54.00	0.1500
P-517	930	J-403	J-394	6	Ductile Iron	130	0.0	-19.00	0.2200
P-518	449	J-622	J-410	6	Ductile Iron	130	0.0	-23.00	0.2600
P-519	224	J-410	J-398	6	Ductile Iron	130	0.0	-23.00	0.2600
P-522	10	J-657	J-432	6	Ductile Iron	130	0.0	-19.00	0.2200
P-523	11	J-432	J-403	6	Ductile Iron	130	0.0	-19.00	0.2200



Label	Elevation (ft)	Flow (gpm)	Hydraulic Grade (ft)
R-1	1,300.00	172	1,300.00
R-2	1,287.10	168	1,287.10
R-3	1,285.38	0	1,285.38

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-1	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-1	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-2	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-2	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-3	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-4	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-338	65	J-338
J-5	TRUE	1,000	3,500	1,006	3,506	20	68	20	65	J-338	65	J-338
J-5	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-6	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-339	65	J-339
J-6	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-7	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-339	65	J-339
J-7	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-8	TRUE	1,000	3,500	1,000	3,500	20	67	20	67	J-635	67	J-635
J-9	TRUE	1,000	3,500	1,000	3,500	20	63	20	61	J-485	61	J-485
J-10	TRUE	1,000	1,473	1,000	1,473	20	20	20	20	J-558	20	J-558
J-10	TRUE	1,000	3,500	1,000	3,500	20	63	20	61	J-485	61	J-485
J-11	TRUE	1,000	1,472	1,000	1,472	20	20	20	20	J-558	20	J-558
J-12	TRUE	1,000	1,472	1,000	1,472	20	20	20	20	J-558	20	J-558
J-13	TRUE	1,000	1,500	1,002	1,502	20	22	20	20	J-337	20	J-337
J-13	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-485	65	J-485
J-14	TRUE	1,000	1,500	1,000	1,500	20	21	20	20	J-337	20	J-337
J-14	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-485	65	J-485
J-15	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-394	65	J-394
J-15	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-16	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-394	65	J-394
J-16	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-17	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-18	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-19	TRUE	1,000	1,500	1,000	1,500	20	21	20	20	J-337	20	J-337
J-19	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-20	TRUE	1,000	3,500	1,000	3,500	20	62	20	61	J-635	61	J-635
J-20	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-21	TRUE	1,000	3,500	1,000	3,500	20	62	20	61	J-635	61	J-635
J-21	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-22	TRUE	1,000	3,500	1,000	3,500	20	66	20	63	J-635	63	J-635
J-22	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-635	66	J-635
J-23	TRUE	1,000	3,500	1,001	3,501	20	66	20	63	J-635	63	J-635
J-23	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-24	TRUE	1,000	3,500	1,000	3,500	20	45	20	46	J-25	46	J-25
J-24	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-25	TRUE	1,000	3,500	1,000	3,500	20	46	20	46	J-24	46	J-24
J-26	TRUE	1,000	2,544	1,000	2,544	20	20	20	21	J-27	21	J-27
J-27	TRUE	1,000	2,561	1,005	2,566	20	20	20	20	J-26	20	J-26
J-28	TRUE	1,000	1,482	1,000	1,482	20	20	20	20	J-558	20	J-558
J-29	TRUE	1,000	1,479	1,000	1,479	20	20	20	20	J-558	20	J-558
J-30	TRUE	1,000	1,425	1,000	1,425	20	20	20	20	J-31	20	J-31
J-31	TRUE	1,000	1,429	1,005	1,433	20	20	20	20	J-30	20	J-30
J-32	TRUE	1,000	3,500	1,000	3,500	20	52	20	52	J-33	52	J-33
J-33	TRUE	1,000	3,500	1,000	3,500	20	50	20	52	J-32	52	J-32
J-33	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-34	60	J-34
J-34	TRUE	1,000	1,081	1,000	1,081	20	20	20	20	J-35	20	J-35
J-34	TRUE	1,000	3,500	1,000	3,500	20	58	20	60	J-33	60	J-33
J-35	FALSE	3,500	1,078	3,505	1,083	20	20	20	20	J-170	20	J-170
J-36	TRUE	1,000	1,030	1,003	1,032	20	20	20	20	J-37	20	J-37

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-37	TRUE	1,000	1,032	1,000	1,032	20	20	20	20	J-36	20	J-36
J-38	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-39	63	J-39
J-39	TRUE	1,000	3,500	1,000	3,500	20	61	20	63	J-38	63	J-38
J-40	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-41	64	J-41
J-41	TRUE	1,000	3,500	1,000	3,500	20	63	20	64	J-40	64	J-40
J-42	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-43	63	J-43
J-43	TRUE	1,000	3,500	1,000	3,500	20	61	20	63	J-42	63	J-42
J-43	TRUE	1,000	3,500	1,000	3,500	20	65	20	64	J-485	64	J-485
J-44	TRUE	1,000	3,500	1,000	3,500	20	62	20	64	J-485	64	J-485
J-47	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-373	61	J-373
J-48	TRUE	1,000	3,500	1,000	3,500	20	59	20	61	J-47	61	J-47
J-49	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-485	65	J-485
J-50	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-485	65	J-485
J-51	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-52	FALSE	1,000	980	1,005	984	20	20	20	20	J-53	20	J-53
J-52	TRUE	1,000	3,500	1,000	3,500	20	66	20	67	J-635	67	J-635
J-53	FALSE	1,000	979	1,000	979	20	20	20	20	J-52	20	J-52
J-53	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-54	TRUE	1,000	3,500	1,000	3,500	20	65	20	67	J-635	67	J-635
J-55	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-485	66	J-485
J-56	FALSE	1,000	777	1,000	777	20	20	20	20	J-57	20	J-57
J-56	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-485	66	J-485
J-57	FALSE	1,000	778	1,000	778	20	20	20	20	J-56	20	J-56
J-61	TRUE	1,000	3,500	1,000	3,500	20	45	20	45	J-62	45	J-62
J-62	TRUE	1,000	3,500	1,000	3,500	20	45	20	45	J-266	45	J-266
J-63	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-63	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-64	66	J-64

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-64	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-64	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-63	66	J-63
J-65	TRUE	1,000	1,444	1,005	1,449	20	20	20	20	J-66	20	J-66
J-65	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-66	TRUE	1,000	1,440	1,000	1,440	20	20	20	20	J-65	20	J-65
J-66	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-635	66	J-635
J-67	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-68	60	J-68
J-67	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-68	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-342	60	J-342
J-68	TRUE	1,000	3,500	1,000	3,500	20	65	20	66	J-635	66	J-635
J-69	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-302	60	J-302
J-69	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-70	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-302	60	J-302
J-70	TRUE	1,000	3,500	1,000	3,500	20	64	20	66	J-635	66	J-635
J-71	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-72	66	J-72
J-72	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-71	66	J-71
J-73	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-73	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-74	66	J-74
J-74	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-74	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-73	66	J-73
J-75	FALSE	3,500	1,331	3,505	1,336	20	20	20	20	J-76	20	J-76
J-76	TRUE	1,000	1,330	1,000	1,330	20	20	20	20	J-75	20	J-75
J-77	TRUE	1,000	3,078	1,000	3,078	20	20	20	22	J-78	22	J-78
J-77	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-78	66	J-78
J-78	TRUE	1,000	3,140	1,003	3,143	20	20	20	20	J-77	20	J-77
J-78	TRUE	1,000	3,500	1,000	3,500	20	62	20	66	J-77	66	J-77
J-79	FALSE	3,500	1,872	3,505	1,878	20	20	20	20	J-558	20	J-558

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-80	TRUE	1,000	1,872	1,000	1,872	20	20	20	20	J-558	20	J-558
J-81	TRUE	1,000	3,500	1,000	3,500	20	49	20	51	J-82	51	J-82
J-81	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-82	TRUE	1,000	3,500	1,000	3,500	20	51	20	51	J-81	51	J-81
J-82	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-635	66	J-635
J-83	TRUE	1,000	3,500	1,000	3,500	20	48	20	48	J-84	48	J-84
J-84	TRUE	1,000	3,500	1,000	3,500	20	47	20	48	J-83	48	J-83
J-85	TRUE	1,000	3,500	1,003	3,503	20	48	20	48	J-86	48	J-86
J-85	TRUE	1,000	3,500	1,000	3,500	20	59	20	63	J-86	63	J-86
J-86	TRUE	1,000	3,500	1,000	3,500	20	46	20	48	J-85	48	J-85
J-86	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-85	63	J-85
J-87	FALSE	1,000	793	1,000	793	20	20	20	20	J-88	20	J-88
J-88	FALSE	1,000	794	1,004	797	20	20	20	20	J-87	20	J-87
J-91	TRUE	1,000	1,293	1,000	1,293	20	20	20	20	J-499	20	J-499
J-91	TRUE	1,000	3,500	1,000	3,500	20	52	20	52	J-326	52	J-326
J-92	TRUE	1,000	1,268	1,000	1,268	20	20	20	22	J-499	22	J-499
J-93	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-394	65	J-394
J-94	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-394	65	J-394
J-95	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-96	61	J-96
J-96	TRUE	1,000	3,500	1,000	3,500	20	59	20	61	J-95	61	J-95
J-97	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-98	61	J-98
J-98	TRUE	1,000	3,500	1,008	3,508	20	60	20	61	J-97	61	J-97
J-99	TRUE	1,000	3,500	1,000	3,500	20	55	20	55	J-100	55	J-100
J-100	TRUE	1,000	3,500	1,000	3,500	20	53	20	55	J-99	55	J-99
J-101	TRUE	1,000	3,500	1,000	3,500	20	42	20	42	J-102	42	J-102
J-101	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-102	66	J-102
J-102	TRUE	1,000	3,500	1,000	3,500	20	40	20	42	J-101	42	J-101

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-102	TRUE	1,000	3,500	1,000	3,500	20	65	20	66	J-101	66	J-101
J-105	TRUE	1,000	1,801	1,000	1,801	20	20	20	21	J-106	21	J-106
J-106	TRUE	1,000	1,811	1,004	1,815	20	20	20	20	J-105	20	J-105
J-106	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-107	TRUE	1,000	1,148	1,004	1,151	20	21	20	20	J-337	20	J-337
J-107	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-108	TRUE	1,000	1,148	1,000	1,148	20	21	20	20	J-337	20	J-337
J-115	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-116	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-117	TRUE	3,500	5,520	3,500	5,521	20	20	20	20	J-118	20	J-118
J-118	TRUE	1,000	3,500	1,000	3,500	20	45	20	47	J-117	47	J-117
J-120	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-121	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-123	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-124	60	J-124
J-124	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-123	60	J-123
J-125	TRUE	1,000	3,500	1,000	3,500	20	22	20	22	J-126	22	J-126
J-125	TRUE	1,000	3,500	1,000	3,500	20	56	20	56	J-126	56	J-126
J-126	TRUE	1,000	3,500	1,000	3,500	20	20	20	22	J-125	22	J-125
J-126	TRUE	1,000	3,500	1,000	3,500	20	51	20	56	J-125	56	J-125
J-128	TRUE	1,000	1,909	1,000	1,909	20	20	20	21	J-129	21	J-129
J-129	TRUE	1,000	1,924	1,002	1,926	20	20	20	20	J-128	20	J-128
J-129	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-130	TRUE	1,000	1,284	1,000	1,284	20	20	20	20	J-499	20	J-499
J-131	TRUE	1,000	1,285	1,000	1,285	20	20	20	20	J-499	20	J-499
J-131	TRUE	1,000	3,500	1,000	3,500	20	65	20	64	J-485	64	J-485
J-132	TRUE	1,000	3,500	1,000	3,500	20	47	20	50	J-133	50	J-133
J-132	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-485	64	J-485

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-133	TRUE	1,000	3,500	1,000	3,500	20	50	20	50	J-132	50	J-132
J-134	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-135	TRUE	1,000	3,500	1,000	3,500	20	67	20	67	J-635	67	J-635
J-136	TRUE	1,000	2,631	1,002	2,634	20	20	20	20	J-137	20	J-137
J-137	TRUE	1,000	2,598	1,000	2,598	20	20	20	21	J-136	21	J-136
J-137	TRUE	1,000	3,500	1,000	3,500	20	64	20	61	J-485	61	J-485
J-138	TRUE	1,000	2,033	1,000	2,033	20	20	20	20	J-139	20	J-139
J-138	TRUE	1,000	3,500	1,000	3,500	20	63	20	61	J-485	61	J-485
J-139	TRUE	1,000	2,017	1,000	2,017	20	20	20	21	J-138	21	J-138
J-139	TRUE	1,000	3,500	1,000	3,500	20	23	20	23	J-140	23	J-140
J-140	TRUE	1,000	2,379	1,000	2,379	20	20	20	21	J-141	21	J-141
J-140	TRUE	1,000	3,500	1,000	3,500	20	21	20	21	J-193	21	J-193
J-141	TRUE	1,000	2,404	1,001	2,405	20	20	20	20	J-140	20	J-140
J-142	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-635	64	J-635
J-142	TRUE	1,000	3,500	1,000	3,500	20	58	20	60	J-485	60	J-485
J-143	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-143	TRUE	1,000	3,500	1,000	3,500	20	64	20	60	J-485	60	J-485
J-144	TRUE	1,000	3,500	1,000	3,500	20	37	20	37	J-145	37	J-145
J-145	TRUE	1,000	3,500	1,000	3,500	20	34	20	37	J-144	37	J-144
J-146	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-147	TRUE	1,000	3,500	1,000	3,500	20	66	20	67	J-635	67	J-635
J-148	TRUE	1,000	1,262	1,000	1,262	20	20	20	20	J-499	20	J-499
J-149	TRUE	1,000	1,258	1,000	1,258	20	20	20	20	J-499	20	J-499
J-150	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-485	66	J-485
J-150	TRUE	1,000	3,500	1,000	3,500	20	57	20	57	J-151	57	J-151
J-151	TRUE	1,000	3,500	1,000	3,500	20	65	20	66	J-485	66	J-485
J-151	TRUE	1,000	3,500	1,000	3,500	20	56	20	57	J-150	57	J-150

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-152	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-153	60	J-153
J-152	TRUE	1,000	3,500	1,000	3,500	20	62	20	60	J-485	60	J-485
J-153	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-152	60	J-152
J-153	TRUE	1,000	3,500	1,000	3,500	20	64	20	60	J-485	60	J-485
J-154	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-327	60	J-327
J-154	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-192	62	J-192
J-155	TRUE	1,000	3,500	1,000	3,500	20	44	20	44	J-327	44	J-327
J-155	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-260	61	J-260
J-156	TRUE	1,000	3,500	1,000	3,500	20	64	20	60	J-485	60	J-485
J-157	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-140	64	J-140
J-160	TRUE	1,000	3,500	1,000	3,500	20	71	20	67	J-635	67	J-635
J-161	TRUE	1,000	3,500	1,000	3,500	20	71	20	67	J-635	67	J-635
J-162	TRUE	1,000	3,500	1,000	3,500	20	50	20	50	J-163	50	J-163
J-163	TRUE	1,000	3,500	1,000	3,500	20	47	20	50	J-162	50	J-162
J-163	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-164	66	J-164
J-164	TRUE	1,000	3,500	1,000	3,500	20	30	20	30	J-596	30	J-596
J-164	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-163	66	J-163
J-165	TRUE	1,000	3,500	1,000	3,500	20	27	20	30	J-596	30	J-596
J-165	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-166	TRUE	1,000	1,201	1,000	1,201	20	20	20	20	J-609	20	J-609
J-166	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-167	TRUE	1,000	1,204	1,003	1,207	20	20	20	20	J-609	20	J-609
J-167	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-168	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-169	66	J-169
J-169	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-168	66	J-168
J-170	TRUE	1,000	1,075	1,000	1,075	20	20	20	20	J-35	20	J-35
J-171	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-270	64	J-270

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-172	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-178	63	J-178
J-173	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-174	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-177	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-178	59	J-178
J-178	TRUE	1,000	3,500	1,000	3,500	20	51	20	59	J-177	59	J-177
J-179	TRUE	1,000	3,500	1,000	3,500	20	43	20	46	J-180	46	J-180
J-180	TRUE	1,000	3,500	1,004	3,504	20	46	20	46	J-179	46	J-179
J-181	TRUE	1,000	3,500	1,000	3,500	20	31	20	31	J-182	31	J-182
J-181	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-182	TRUE	1,000	3,500	1,000	3,500	20	30	20	31	J-460	31	J-460
J-183	TRUE	3,500	6,000	3,503	6,003	20	53	20	53	J-184	53	J-184
J-184	TRUE	1,000	3,500	1,000	3,500	20	65	20	66	J-635	66	J-635
J-185	TRUE	1,000	3,500	1,000	3,500	20	62	20	59	J-485	59	J-485
J-185	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-186	TRUE	1,000	3,500	1,000	3,500	20	62	20	59	J-485	59	J-485
J-186	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-187	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-385	65	J-385
J-188	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-385	65	J-385
J-189	FALSE	1,000	890	1,000	890	20	20	20	20	J-190	20	J-190
J-189	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-190	FALSE	1,000	890	1,002	892	20	20	20	20	J-189	20	J-189
J-190	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-191	TRUE	1,000	3,500	1,000	3,500	20	42	20	42	J-139	42	J-139
J-192	TRUE	1,000	3,500	1,000	3,500	20	33	20	42	J-194	42	J-194
J-193	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-385	66	J-385
J-193	TRUE	1,000	3,373	1,000	3,373	20	20	20	20	J-194	20	J-194
J-194	TRUE	1,000	3,312	1,000	3,312	20	20	20	20	J-260	20	J-260

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-195	TRUE	1,000	3,500	1,000	3,500	20	64	20	63	J-33	63	J-33
J-195	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-485	65	J-485
J-196	TRUE	1,000	3,500	1,000	3,500	20	66	20	64	J-635	64	J-635
J-196	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-485	65	J-485
J-197	TRUE	1,000	2,432	1,000	2,432	20	20	20	22	J-198	22	J-198
J-197	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-198	TRUE	1,000	2,476	1,000	2,476	20	20	20	20	J-197	20	J-197
J-199	TRUE	1,000	3,500	1,000	3,500	20	21	20	25	J-200	25	J-200
J-200	TRUE	1,000	3,500	1,000	3,500	20	25	20	25	J-199	25	J-199
J-200	TRUE	1,000	3,500	1,000	3,500	20	49	20	49	J-140	49	J-140
J-201	TRUE	1,000	3,500	1,000	3,500	20	47	20	47	J-260	47	J-260
J-202	TRUE	1,000	3,500	1,000	3,500	20	66	20	63	J-485	63	J-485
J-203	TRUE	1,000	1,754	1,000	1,754	20	20	20	21	J-204	21	J-204
J-203	TRUE	1,000	3,500	1,000	3,500	20	64	20	63	J-485	63	J-485
J-204	TRUE	1,000	1,772	1,003	1,774	20	20	20	20	J-203	20	J-203
J-204	TRUE	1,000	3,500	1,000	3,500	20	65	20	64	J-485	64	J-485
J-205	TRUE	1,000	3,500	1,000	3,500	20	68	20	64	J-635	64	J-635
J-209	TRUE	1,000	3,500	1,000	3,500	20	66	20	63	J-485	63	J-485
J-210	TRUE	1,000	3,500	1,000	3,500	20	57	20	63	J-485	63	J-485
J-212	TRUE	1,000	1,431	1,000	1,431	20	20	20	21	J-213	21	J-213
J-212	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-485	65	J-485
J-213	TRUE	1,000	1,441	1,004	1,445	20	20	20	20	J-212	20	J-212
J-213	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-485	65	J-485
J-214	TRUE	1,000	1,512	1,000	1,512	20	22	20	20	J-337	20	J-337
J-214	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-485	65	J-485
J-215	TRUE	1,000	3,293	1,000	3,293	20	20	20	24	J-216	24	J-216
J-215	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-485	65	J-485

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-216	TRUE	1,000	3,445	1,000	3,445	20	20	20	20	J-215	20	J-215
J-217	TRUE	1,000	3,500	1,000	3,500	20	51	20	52	J-218	52	J-218
J-218	TRUE	1,000	3,500	1,000	3,500	20	50	20	51	J-83	51	J-83
J-219	TRUE	1,000	3,500	1,001	3,501	20	63	20	63	J-418	63	J-418
J-220	TRUE	1,000	3,500	1,000	3,500	20	60	20	63	J-418	63	J-418
J-221	TRUE	1,000	1,761	1,009	1,770	20	20	20	20	J-222	20	J-222
J-222	TRUE	1,000	1,757	1,000	1,757	20	20	20	20	J-221	20	J-221
J-222	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-223	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-224	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-485	63	J-485
J-225	TRUE	1,000	3,500	1,000	3,500	20	64	20	62	J-485	62	J-485
J-226	TRUE	1,000	3,500	1,000	3,500	20	65	20	64	J-485	64	J-485
J-227	TRUE	1,000	3,500	1,000	3,500	20	39	20	39	J-145	39	J-145
J-227	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-85	64	J-85
J-229	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-231	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-232	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-398	64	J-398
J-232	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-233	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-394	65	J-394
J-233	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-234	FALSE	3,500	1,468	3,505	1,474	20	20	20	20	J-558	20	J-558
J-235	TRUE	1,000	3,500	1,000	3,500	20	61	20	60	J-485	60	J-485
J-235	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-236	TRUE	1,000	3,500	1,000	3,500	20	63	20	60	J-485	60	J-485
J-237	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-239	TRUE	1,000	3,500	1,000	3,500	20	62	20	60	J-485	60	J-485
J-239	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-240	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-241	63	J-241
J-241	TRUE	1,000	3,500	1,000	3,500	20	59	20	63	J-240	63	J-240
J-242	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-385	66	J-385
J-242	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-243	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-263	64	J-263
J-244	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-245	62	J-245
J-245	TRUE	1,000	3,500	1,000	3,500	20	48	20	62	J-244	62	J-244
J-246	TRUE	1,000	3,500	1,000	3,500	20	59	20	60	J-247	60	J-247
J-247	TRUE	1,000	3,500	1,000	3,500	20	57	20	57	J-91	57	J-91
J-250	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-252	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-253	TRUE	1,000	3,500	1,000	3,500	20	64	20	66	J-635	66	J-635
J-254	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-385	66	J-385
J-254	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-255	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-299	62	J-299
J-255	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-256	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-385	66	J-385
J-257	TRUE	1,000	3,500	1,000	3,500	20	61	20	59	J-485	59	J-485
J-259	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-260	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-260	TRUE	1,000	3,202	1,000	3,202	20	20	20	23	J-194	23	J-194
J-261	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-394	65	J-394
J-262	TRUE	1,000	3,500	1,003	3,503	20	62	20	62	J-613	62	J-613
J-262	TRUE	1,000	3,500	1,000	3,500	20	64	20	62	J-485	62	J-485
J-263	TRUE	1,000	3,500	1,000	3,500	20	59	20	64	J-243	64	J-243
J-263	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-264	TRUE	1,000	1,416	1,000	1,416	20	20	20	20	J-558	20	J-558

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-265	TRUE	1,000	1,404	1,003	1,406	20	20	20	21	J-558	21	J-558
J-266	TRUE	1,000	3,500	1,000	3,500	20	61	20	58	J-485	58	J-485
J-266	TRUE	1,000	3,500	1,000	3,500	20	41	20	45	J-61	45	J-61
J-268	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-485	65	J-485
J-270	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-373	60	J-373
J-271	TRUE	1,000	3,500	1,004	3,504	20	57	20	57	J-272	57	J-272
J-272	TRUE	1,000	3,500	1,000	3,500	20	52	20	57	J-271	57	J-271
J-272	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-273	FALSE	3,500	1,306	3,502	1,308	20	20	20	20	J-499	20	J-499
J-274	TRUE	1,000	1,306	1,000	1,306	20	20	20	20	J-499	20	J-499
J-276	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-276	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-485	66	J-485
J-277	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-277	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-485	66	J-485
J-278	TRUE	1,000	1,261	1,000	1,261	20	20	20	20	J-499	20	J-499
J-279	TRUE	1,000	1,264	1,000	1,264	20	20	20	20	J-499	20	J-499
J-280	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-281	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-394	65	J-394
J-282	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-282	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-284	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-600	65	J-600
J-284	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-285	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-286	TRUE	3,500	5,643	3,502	5,645	20	20	20	20	J-287	20	J-287
J-287	TRUE	1,000	3,500	1,000	3,500	20	41	20	47	J-286	47	J-286
J-287	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-290	TRUE	1,000	3,500	1,000	3,500	20	70	20	65	J-635	65	J-635

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-291	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-291	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-292	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-293	60	J-293
J-293	TRUE	1,000	3,500	1,000	3,500	20	53	20	60	J-292	60	J-292
J-293	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-378	66	J-378
J-294	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-311	58	J-311
J-295	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-311	60	J-311
J-296	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-479	58	J-479
J-296	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-322	66	J-322
J-297	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-296	59	J-296
J-297	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-163	66	J-163
J-298	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-298	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-299	TRUE	1,000	3,500	1,000	3,500	20	56	20	62	J-255	62	J-255
J-301	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-302	66	J-302
J-302	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-70	60	J-70
J-302	TRUE	1,000	3,500	1,000	3,500	20	37	20	66	J-301	66	J-301
J-305	TRUE	1,000	1,670	1,000	1,670	20	20	20	22	J-306	22	J-306
J-306	FALSE	3,500	1,698	3,500	1,698	20	20	20	20	J-305	20	J-305
J-307	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-311	TRUE	1,000	3,500	1,000	3,500	20	27	20	34	J-312	34	J-312
J-312	TRUE	3,500	4,229	3,501	4,230	20	20	20	20	J-311	20	J-311
J-312	TRUE	1,000	3,500	1,000	3,500	20	60	20	62	J-48	62	J-48
J-314	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-485	66	J-485
J-315	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-485	66	J-485
J-321	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-67	60	J-67
J-321	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-365	66	J-365

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-322	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-478	60	J-478
J-322	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-355	66	J-355
J-323	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-324	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-635	66	J-635
J-324	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-325	TRUE	1,000	3,500	1,000	3,500	20	58	20	65	J-394	65	J-394
J-325	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-378	66	J-378
J-326	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-394	65	J-394
J-326	TRUE	1,000	3,500	1,000	3,500	20	49	20	49	J-62	49	J-62
J-327	TRUE	1,000	2,520	1,000	2,520	20	20	20	55	J-155	55	J-155
J-327	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-330	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-635	65	J-635
J-331	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-485	65	J-485
J-332	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-333	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-334	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-447	58	J-447
J-336	FALSE	1,000	940	1,000	940	20	20	20	20	J-337	20	J-337
J-336	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-337	FALSE	1,000	931	1,000	931	20	20	20	21	J-336	21	J-336
J-338	TRUE	1,000	3,500	1,000	3,500	20	49	20	59	J-339	59	J-339
J-339	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-338	59	J-338
J-340	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-341	62	J-341
J-340	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-343	58	J-343
J-341	TRUE	1,000	3,500	1,000	3,500	20	52	20	62	J-340	62	J-340
J-342	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-68	60	J-68
J-343	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-340	58	J-340
J-345	TRUE	1,000	3,500	1,000	3,500	20	47	20	49	J-83	49	J-83

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-346	TRUE	1,000	3,500	1,000	3,500	20	72	20	66	J-635	66	J-635
J-347	TRUE	1,000	3,500	1,002	3,502	20	48	20	58	J-348	58	J-348
J-348	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-347	58	J-347
J-349	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-385	65	J-385
J-349	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-350	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-385	65	J-385
J-353	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-102	66	J-102
J-355	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-394	65	J-394
J-355	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-322	66	J-322
J-356	TRUE	1,000	3,382	1,000	3,382	20	20	20	20	J-357	20	J-357
J-357	FALSE	3,500	3,083	3,503	3,086	20	20	20	29	J-356	29	J-356
J-358	TRUE	1,000	1,708	1,000	1,708	20	20	20	23	J-359	23	J-359
J-359	TRUE	1,000	1,759	1,000	1,759	20	20	20	20	J-358	20	J-358
J-361	TRUE	1,000	1,367	1,000	1,367	20	20	20	20	J-499	20	J-499
J-362	FALSE	3,500	1,374	3,503	1,377	20	20	20	20	J-499	20	J-499
J-363	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-364	58	J-364
J-363	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-364	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-363	58	J-363
J-365	TRUE	1,000	3,500	1,001	3,501	20	68	20	66	J-635	66	J-635
J-365	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-321	66	J-321
J-366	TRUE	1,000	3,500	1,000	3,500	20	56	20	66	J-635	66	J-635
J-366	TRUE	1,000	3,500	1,000	3,500	20	45	20	41	J-485	41	J-485
J-367	TRUE	1,000	2,440	1,000	2,440	20	20	20	20	J-368	20	J-368
J-367	TRUE	1,000	3,500	1,000	3,500	20	66	20	62	J-485	62	J-485
J-368	TRUE	1,000	2,299	1,000	2,299	20	20	20	26	J-367	26	J-367
J-369	TRUE	1,000	3,500	1,000	3,500	20	56	20	66	J-635	66	J-635
J-370	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-370	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-371	TRUE	1,000	3,500	1,000	3,500	20	22	20	22	J-500	22	J-500
J-372	TRUE	1,000	3,207	1,000	3,207	20	20	20	30	J-500	30	J-500
J-372	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-270	62	J-270
J-373	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-373	TRUE	1,000	3,500	1,000	3,500	20	58	20	60	J-270	60	J-270
J-374	TRUE	1,000	3,500	1,000	3,500	20	55	20	66	J-635	66	J-635
J-375	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-375	TRUE	1,000	3,500	1,000	3,500	20	66	20	64	J-485	64	J-485
J-377	TRUE	1,000	3,500	1,000	3,500	20	43	20	43	J-447	43	J-447
J-378	TRUE	1,000	3,500	1,000	3,500	20	29	20	43	J-447	43	J-447
J-378	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-325	66	J-325
J-380	TRUE	1,000	2,853	1,005	2,857	20	21	20	20	J-656	20	J-656
J-381	TRUE	1,000	1,923	1,004	1,927	20	20	20	23	J-382	23	J-382
J-382	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-342	60	J-342
J-382	TRUE	1,000	1,794	1,001	1,795	20	20	20	28	J-656	28	J-656
J-383	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-123	60	J-123
J-383	TRUE	1,000	1,716	1,005	1,721	20	21	20	20	J-656	20	J-656
J-384	TRUE	1,000	3,500	1,000	3,500	20	58	20	59	J-394	59	J-394
J-384	TRUE	1,000	1,806	1,003	1,808	20	20	20	26	J-656	26	J-656
J-385	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-624	65	J-624
J-385	TRUE	1,000	1,977	1,003	1,980	20	20	20	23	J-384	23	J-384
J-386	TRUE	1,000	3,500	1,000	3,500	20	56	20	57	J-82	57	J-82
J-386	TRUE	1,000	1,504	1,002	1,507	20	20	20	20	J-656	20	J-656
J-387	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-423	66	J-423
J-387	TRUE	1,000	2,780	1,003	2,783	20	20	20	47	J-440	47	J-440
J-388	TRUE	1,000	1,326	1,006	1,332	20	20	20	20	J-658	20	J-658

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-389	FALSE	3,500	3,156	3,503	3,159	20	20	20	20	J-390	20	J-390
J-389	TRUE	1,000	2,318	1,003	2,321	20	20	20	34	J-337	34	J-337
J-390	TRUE	1,000	3,076	1,000	3,076	20	20	20	23	J-389	23	J-389
J-391	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-391	TRUE	1,000	2,181	1,006	2,187	20	20	20	30	J-337	30	J-337
J-392	TRUE	1,000	2,643	1,005	2,648	20	20	20	47	J-665	47	J-665
J-393	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-162	60	J-162
J-394	TRUE	1,000	3,500	1,000	3,500	20	57	20	59	J-610	59	J-610
J-394	TRUE	1,000	2,518	1,005	2,523	20	20	20	51	J-403	51	J-403
J-395	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-396	60	J-396
J-396	TRUE	1,000	2,286	1,000	2,286	20	20	20	64	J-395	64	J-395
J-397	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-397	TRUE	1,000	1,677	1,008	1,685	20	20	20	27	J-621	27	J-621
J-398	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-399	60	J-399
J-398	TRUE	1,000	2,379	1,005	2,384	20	20	20	23	J-410	23	J-410
J-399	TRUE	1,000	3,500	1,000	3,500	20	46	20	60	J-398	60	J-398
J-400	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-401	TRUE	1,000	3,500	1,000	3,500	20	53	20	53	J-24	53	J-24
J-401	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-385	65	J-385
J-402	TRUE	1,000	3,500	1,000	3,500	20	25	20	25	J-200	25	J-200
J-403	TRUE	1,000	3,500	1,000	3,500	20	47	20	62	J-404	62	J-404
J-403	TRUE	1,000	2,797	1,000	2,797	20	20	20	21	J-432	21	J-432
J-404	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-403	62	J-403
J-404	TRUE	1,000	3,500	1,000	3,500	20	57	20	57	J-271	57	J-271
J-405	TRUE	3,500	6,000	3,500	6,000	20	38	20	38	J-406	38	J-406
J-405	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-394	65	J-394
J-406	TRUE	1,000	3,500	1,000	3,500	20	54	20	54	J-407	54	J-407

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-407	TRUE	1,000	3,500	1,000	3,500	20	51	20	51	J-408	51	J-408
J-408	TRUE	1,000	3,500	1,000	3,500	20	34	20	51	J-407	51	J-407
J-408	TRUE	1,000	3,500	1,000	3,500	20	62	20	61	J-635	61	J-635
J-409	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-410	61	J-410
J-410	TRUE	1,000	3,500	1,000	3,500	20	46	20	61	J-409	61	J-409
J-410	TRUE	1,000	2,114	1,000	2,114	20	20	20	26	J-622	26	J-622
J-411	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-405	58	J-405
J-412	TRUE	1,000	3,500	1,000	3,500	20	56	20	56	J-511	56	J-511
J-412	TRUE	1,000	2,582	1,000	2,582	20	20	20	24	J-136	24	J-136
J-413	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-412	59	J-412
J-414	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-414	TRUE	1,000	1,420	1,000	1,420	20	20	20	20	J-558	20	J-558
J-415	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-416	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-417	TRUE	1,000	3,500	1,000	3,500	20	47	20	47	J-117	47	J-117
J-418	TRUE	1,000	3,500	1,002	3,502	20	32	20	32	J-419	32	J-419
J-419	TRUE	1,000	3,373	1,000	3,373	20	20	20	34	J-418	34	J-418
J-421	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-421	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-664	58	J-664
J-422	TRUE	1,000	3,500	1,000	3,500	20	53	20	53	J-86	53	J-86
J-423	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-425	TRUE	1,000	3,500	1,004	3,504	20	46	20	51	J-82	51	J-82
J-426	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-423	66	J-423
J-427	TRUE	1,000	3,500	1,000	3,500	20	52	20	52	J-179	52	J-179
J-428	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-385	65	J-385
J-429	TRUE	1,000	3,500	1,000	3,500	20	48	20	65	J-385	65	J-385
J-430	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-394	65	J-394

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-431	TRUE	1,000	3,500	1,000	3,500	20	54	20	66	J-635	66	J-635
J-432	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-432	TRUE	1,000	2,818	1,000	2,818	20	20	20	20	J-403	20	J-403
J-434	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-394	65	J-394
J-435	TRUE	1,000	3,500	1,003	3,503	20	68	20	65	J-394	65	J-394
J-436	TRUE	1,000	3,437	1,000	3,437	20	20	20	24	J-500	24	J-500
J-437	TRUE	1,000	1,357	1,000	1,357	20	20	20	20	J-499	20	J-499
J-438	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-439	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-440	TRUE	1,000	2,794	1,000	2,794	20	20	20	31	J-441	31	J-441
J-441	TRUE	1,000	3,196	1,000	3,196	20	20	20	20	J-440	20	J-440
J-442	TRUE	1,000	3,500	1,000	3,500	20	55	20	57	J-77	57	J-77
J-443	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-385	67	J-385
J-444	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-446	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-385	65	J-385
J-447	TRUE	1,000	3,500	1,001	3,501	20	40	20	41	J-306	41	J-306
J-448	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-449	TRUE	1,000	3,500	1,000	3,500	20	65	20	67	J-635	67	J-635
J-450	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-451	TRUE	1,000	3,500	1,000	3,500	20	66	20	67	J-635	67	J-635
J-453	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-454	TRUE	1,000	3,500	1,000	3,500	20	65	20	67	J-635	67	J-635
J-456	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-457	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-394	65	J-394
J-458	TRUE	1,000	3,500	1,000	3,500	20	39	20	59	J-459	59	J-459
J-459	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-458	59	J-458
J-460	TRUE	1,000	3,500	1,000	3,500	20	26	20	31	J-182	31	J-182

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-461	TRUE	1,000	3,500	1,000	3,500	20	27	20	27	J-500	27	J-500
J-462	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-463	60	J-463
J-463	TRUE	1,000	3,500	1,000	3,500	20	55	20	55	J-596	55	J-596
J-464	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-154	60	J-154
J-465	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-162	60	J-162
J-466	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-485	66	J-485
J-467	TRUE	1,000	3,500	1,001	3,501	20	41	20	47	J-468	47	J-468
J-468	TRUE	1,000	3,500	1,000	3,500	20	42	20	43	J-102	43	J-102
J-469	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-470	TRUE	1,000	3,500	1,000	3,500	20	63	20	67	J-635	67	J-635
J-471	TRUE	1,000	3,500	1,000	3,500	20	48	20	49	J-286	49	J-286
J-472	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-99	62	J-99
J-473	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-341	62	J-341
J-475	TRUE	1,000	3,500	1,000	3,500	20	69	20	64	J-635	64	J-635
J-476	TRUE	1,000	2,646	1,000	2,646	20	20	20	22	J-560	22	J-560
J-477	TRUE	1,000	2,729	1,000	2,729	20	20	20	20	J-558	20	J-558
J-478	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-311	60	J-311
J-479	TRUE	1,000	3,500	1,000	3,500	20	34	20	34	J-480	34	J-480
J-480	TRUE	3,500	3,854	3,502	3,856	20	20	20	27	J-479	27	J-479
J-483	FALSE	1,000	963	1,001	964	20	20	20	20	J-337	20	J-337
J-484	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-293	60	J-293
J-485	TRUE	1,000	3,497	1,000	3,497	20	20	20	22	J-532	22	J-532
J-487	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-489	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-491	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-492	TRUE	1,000	3,500	1,000	3,500	20	61	20	66	J-635	66	J-635
J-496	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-394	65	J-394

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-498	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-467	63	J-467
J-499	TRUE	1,000	1,210	1,000	1,210	20	20	20	24	J-278	24	J-278
J-500	TRUE	1,000	3,341	1,000	3,341	20	20	20	27	J-372	27	J-372
J-501	TRUE	1,000	2,947	1,000	2,947	20	20	20	23	J-502	23	J-502
J-502	TRUE	1,000	2,823	1,000	2,823	20	20	20	28	J-501	28	J-501
J-504	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-394	65	J-394
J-505	TRUE	1,000	3,500	1,000	3,500	20	43	20	46	J-402	46	J-402
J-506	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-509	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-510	TRUE	1,000	3,500	1,000	3,500	20	39	20	66	J-635	66	J-635
J-511	TRUE	1,000	3,500	1,000	3,500	20	50	20	52	J-471	52	J-471
J-512	TRUE	1,000	3,500	1,000	3,500	20	44	20	44	J-227	44	J-227
J-513	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-514	TRUE	1,000	3,500	1,000	3,500	20	38	20	65	J-635	65	J-635
J-516	TRUE	1,000	3,182	1,002	3,184	20	20	20	22	J-544	22	J-544
J-518	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-519	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-520	TRUE	1,000	3,377	1,004	3,380	20	20	20	21	J-30	21	J-30
J-524	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-526	TRUE	1,000	3,500	1,000	3,500	20	70	20	65	J-635	65	J-635
J-528	TRUE	1,000	3,500	1,000	3,500	20	59	20	61	J-410	61	J-410
J-531	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-532	TRUE	1,000	3,500	1,000	3,500	20	22	20	21	J-485	21	J-485
J-533	TRUE	1,000	3,500	1,000	3,500	20	45	20	64	J-534	64	J-534
J-534	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-639	62	J-639
J-535	TRUE	1,000	3,500	1,000	3,500	20	40	20	40	J-596	40	J-596
J-536	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-635	65	J-635

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-537	TRUE	1,000	3,500	1,000	3,500	20	69	20	64	J-635	64	J-635
J-543	TRUE	1,000	3,500	1,000	3,500	20	71	20	67	J-635	67	J-635
J-544	TRUE	1,000	3,179	1,001	3,180	20	20	20	23	J-516	23	J-516
J-546	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-547	TRUE	1,000	2,791	1,001	2,793	20	20	20	20	J-140	20	J-140
J-550	TRUE	1,000	3,361	1,000	3,361	20	20	20	20	J-551	20	J-551
J-551	TRUE	1,000	2,362	1,002	2,364	20	20	20	46	J-550	46	J-550
J-552	TRUE	1,000	3,500	1,000	3,500	20	48	20	50	J-117	50	J-117
J-557	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-558	FALSE	3,500	1,414	3,500	1,414	20	20	20	20	J-499	20	J-499
J-559	TRUE	1,000	1,322	1,000	1,322	20	20	20	20	J-499	20	J-499
J-560	TRUE	1,000	1,751	1,001	1,752	20	20	20	25	J-359	25	J-359
J-561	TRUE	1,000	2,530	1,003	2,533	20	20	20	20	J-197	20	J-197
J-562	TRUE	1,000	3,500	1,000	3,500	20	70	20	65	J-635	65	J-635
J-563	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-385	66	J-385
J-565	TRUE	1,000	2,417	1,000	2,417	20	20	20	20	J-106	20	J-106
J-568	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-338	65	J-338
J-571	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-572	TRUE	1,000	2,699	1,000	2,699	20	20	20	20	J-558	20	J-558
J-573	TRUE	1,000	3,196	1,001	3,197	20	20	20	29	J-544	29	J-544
J-578	TRUE	1,000	3,500	1,001	3,501	20	64	20	62	J-635	62	J-635
J-579	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-580	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-385	66	J-385
J-581	TRUE	1,000	3,500	1,003	3,503	20	69	20	65	J-339	65	J-339
J-582	TRUE	1,000	3,425	1,000	3,425	20	20	20	20	J-357	20	J-357
J-583	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-585	TRUE	1,000	2,667	1,004	2,670	20	20	20	41	J-27	41	J-27

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-587	TRUE	1,000	1,382	1,004	1,386	20	20	20	20	J-591	20	J-591
J-588	TRUE	1,000	2,061	1,002	2,063	20	21	20	20	J-337	20	J-337
J-590	TRUE	1,000	1,077	1,004	1,081	20	20	20	21	J-53	21	J-53
J-591	TRUE	1,000	1,165	1,008	1,174	20	20	20	33	J-587	33	J-587
J-592	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-86	64	J-86
J-593	TRUE	1,000	3,325	1,000	3,325	20	20	20	38	J-387	38	J-387
J-594	TRUE	1,000	1,233	1,000	1,233	20	20	20	20	J-170	20	J-170
J-596	TRUE	1,000	2,986	1,000	2,986	20	20	20	41	J-165	41	J-165
J-597	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-485	65	J-485
J-598	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-599	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-600	TRUE	1,000	3,500	1,001	3,501	20	65	20	65	J-284	65	J-284
J-602	TRUE	1,000	3,500	1,000	3,500	20	58	20	66	J-635	66	J-635
J-605	TRUE	1,000	2,027	1,005	2,031	20	20	20	20	J-139	20	J-139
J-606	TRUE	1,000	2,316	1,001	2,317	20	20	20	20	J-139	20	J-139
J-607	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-608	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-609	TRUE	1,000	1,011	1,002	1,013	20	20	20	35	J-167	35	J-167
J-610	TRUE	1,000	3,500	1,000	3,500	20	38	20	42	J-618	42	J-618
J-613	TRUE	1,000	1,878	1,001	1,879	20	20	20	67	J-339	67	J-339
J-614	TRUE	1,000	2,720	1,001	2,721	20	20	20	45	J-501	45	J-501
J-615	FALSE	1,000	777	1,000	777	20	20	20	20	J-56	20	J-56
J-616	FALSE	1,000	857	1,008	865	20	20	20	21	J-56	21	J-56
J-617	TRUE	1,000	3,342	1,002	3,344	20	20	20	26	J-215	26	J-215
J-618	TRUE	1,000	3,500	1,000	3,500	20	24	20	27	J-215	27	J-215
J-619	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-385	66	J-385
J-620	TRUE	1,000	3,500	1,000	3,500	20	64	20	60	J-485	60	J-485

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-621	TRUE	1,000	1,707	1,008	1,715	20	20	20	25	J-397	25	J-397
J-622	TRUE	1,000	1,837	1,008	1,845	20	20	20	28	J-621	28	J-621
J-623	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-624	TRUE	1,000	3,500	1,000	3,500	20	62	20	63	J-386	63	J-386
J-625	TRUE	1,000	1,683	1,000	1,683	20	20	20	22	J-306	22	J-306
J-626	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-661	60	J-661
J-627	TRUE	1,000	3,500	1,000	3,500	20	55	20	52	J-485	52	J-485
J-628	TRUE	1,000	3,500	1,000	3,500	20	61	20	58	J-485	58	J-485
J-629	TRUE	1,000	1,209	1,003	1,212	20	20	20	45	J-306	45	J-306
J-630	TRUE	1,000	1,726	1,003	1,729	20	20	20	20	J-306	20	J-306
J-632	TRUE	1,000	1,086	1,005	1,091	20	20	20	21	J-189	21	J-189
J-633	FALSE	1,000	907	1,003	910	20	20	20	20	J-189	20	J-189
J-635	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-484	61	J-484
J-638	TRUE	1,000	3,500	1,000	3,500	20	65	20	62	J-635	62	J-635
J-639	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-401	62	J-401
J-640	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-641	63	J-641
J-641	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-427	62	J-427
J-642	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-86	64	J-86
J-643	TRUE	1,000	3,500	1,000	3,500	20	67	20	63	J-635	63	J-635
J-646	TRUE	1,000	2,083	1,000	2,083	20	20	20	47	J-368	47	J-368
J-647	TRUE	1,000	1,065	1,009	1,074	20	20	20	44	J-656	44	J-656
J-648	FALSE	1,000	780	1,002	782	20	20	20	32	J-189	32	J-189
J-649	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-133	59	J-133
J-651	TRUE	1,000	1,073	1,003	1,075	20	20	20	20	J-36	20	J-36
J-652	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-600	65	J-600
J-656	TRUE	1,000	1,246	1,005	1,252	20	20	20	35	J-386	35	J-386
J-657	TRUE	1,000	2,837	1,005	2,842	20	20	20	20	J-432	20	J-432

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-658	TRUE	1,000	1,060	1,005	1,066	20	20	20	37	J-388	37	J-388
J-661	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-395	60	J-395
J-662	TRUE	1,000	3,500	1,000	3,500	20	48	20	50	J-133	50	J-133
J-664	TRUE	1,000	3,500	1,003	3,503	20	58	20	58	J-421	58	J-421
J-665	TRUE	1,000	2,944	1,005	2,949	20	20	20	31	J-391	31	J-391
J-667	TRUE	1,000	3,500	1,000	3,500	20	40	20	38	J-485	38	J-485
J-673	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-624	63	J-624



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,286.21	0.0	1,457.68	74
J-2	1,286.20	0.0	1,457.68	74
J-3	1,286.21	0.0	1,457.68	74
J-4	1,287.47	0.0	1,457.68	74
J-5	1,287.47	11.0	1,457.68	74
J-6	1,287.63	0.0	1,457.68	74
J-7	1,287.63	0.0	1,457.68	74
J-10	1,282.55	0.0	1,457.21	76
J-11	1,282.55	0.0	1,457.21	76
J-12	1,282.56	0.0	1,457.21	76
J-13	1,295.30	4.0	1,457.41	70
J-14	1,295.31	0.0	1,457.41	70
J-15	1,286.20	0.0	1,457.68	74
J-16	1,286.20	0.0	1,457.68	74
J-19	1,295.33	0.0	1,457.41	70
J-20	1,296.92	0.0	1,457.67	70
J-21	1,296.71	0.0	1,457.67	70
J-22	1,290.04	0.0	1,457.67	73
J-23	1,290.02	3.0	1,457.67	73
J-24	1,293.63	0.0	1,457.59	71
J-25	1,293.62	0.0	1,457.59	71
J-26	1,291.44	0.0	1,457.59	72
J-27	1,291.45	9.0	1,457.59	72
J-28	1,282.60	0.0	1,457.21	76
J-29	1,282.58	0.0	1,457.21	76
J-30	1,291.91	0.0	1,457.48	72
J-31	1,291.90	9.0	1,457.48	72
J-32	1,288.87	0.0	1,457.67	73
J-33	1,288.88	0.0	1,457.67	73
J-34	1,280.00	0.0	1,457.19	77
J-35	1,280.00	9.0	1,457.19	77
J-36	1,290.00	5.0	1,457.43	72
J-37	1,290.00	0.0	1,457.43	72
J-38	1,286.06	0.0	1,457.68	74
J-39	1,286.06	0.0	1,457.68	74
J-40	1,287.34	0.0	1,457.68	74
J-41	1,287.33	0.0	1,457.68	74
J-42	1,286.02	0.0	1,457.68	74
J-43	1,286.02	0.0	1,457.68	74
J-52	1,282.73	9.0	1,457.46	76
J-53	1,282.76	0.0	1,457.46	76
J-56	1,284.34	0.0	1,457.41	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-57	1,284.34	0.0	1,457.41	75
J-63	1,288.88	0.0	1,457.67	73
J-64	1,288.88	0.0	1,457.67	73
J-65	1,289.81	9.0	1,457.51	73
J-66	1,289.79	0.0	1,457.51	73
J-67	1,300.00	0.0	1,457.67	68
J-68	1,300.00	0.0	1,457.67	68
J-69	1,300.00	0.0	1,457.67	68
J-70	1,300.00	0.0	1,457.67	68
J-73	1,281.08	0.0	1,457.66	76
J-74	1,281.07	0.0	1,457.66	76
J-75	1,281.71	9.0	1,457.20	76
J-76	1,281.72	0.0	1,457.20	76
J-77	1,290.00	0.0	1,457.59	73
J-78	1,290.00	6.0	1,457.59	73
J-79	1,282.29	10.0	1,457.27	76
J-80	1,282.26	0.0	1,457.27	76
J-81	1,294.53	0.0	1,457.60	71
J-82	1,294.54	0.0	1,457.60	71
J-83	1,288.32	0.0	1,457.68	73
J-84	1,288.30	0.0	1,457.68	73
J-85	1,290.29	7.0	1,457.60	72
J-86	1,290.32	0.0	1,457.60	72
J-87	1,282.10	0.0	1,457.45	76
J-88	1,282.07	7.0	1,457.45	76
J-91	1,282.43	0.0	1,457.20	76
J-92	1,282.41	0.0	1,457.20	76
J-93	1,286.20	0.0	1,457.68	74
J-94	1,286.19	0.0	1,457.68	74
J-95	1,287.69	0.0	1,457.68	74
J-96	1,287.71	0.0	1,457.68	74
J-97	1,287.75	0.0	1,457.68	74
J-98	1,287.77	16.0	1,457.68	74
J-99	1,287.97	0.0	1,457.68	73
J-100	1,287.97	0.0	1,457.68	73
J-101	1,288.28	0.0	1,457.68	73
J-102	1,288.30	0.0	1,457.68	73
J-105	1,285.07	0.0	1,457.38	75
J-106	1,285.10	7.0	1,457.38	75
J-107	1,296.73	7.0	1,457.40	70
J-108	1,296.73	0.0	1,457.40	70
J-115	1,287.08	0.0	1,457.69	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-116	1,287.10	0.0	1,457.80	74
J-117	1,299.66	1.0	1,457.67	68
J-118	1,299.61	0.0	1,457.67	68
J-123	1,300.00	0.0	1,457.69	68
J-124	1,300.00	0.0	1,457.69	68
J-125	1,280.00	0.0	1,457.47	77
J-126	1,280.00	0.0	1,457.47	77
J-128	1,282.74	0.0	1,457.34	76
J-129	1,282.74	5.0	1,457.34	76
J-130	1,282.41	0.0	1,457.20	76
J-131	1,282.41	0.0	1,457.20	76
J-132	1,287.94	0.0	1,457.67	73
J-133	1,287.95	0.0	1,457.67	73
J-134	1,287.33	0.0	1,457.60	74
J-135	1,287.29	0.0	1,457.60	74
J-136	1,287.37	5.0	1,457.48	74
J-137	1,287.36	0.0	1,457.48	74
J-138	1,280.26	0.0	1,457.35	77
J-139	1,280.30	0.0	1,457.35	77
J-140	1,280.86	0.0	1,457.35	76
J-141	1,280.83	3.0	1,457.35	76
J-142	1,288.87	0.0	1,457.67	73
J-143	1,288.87	0.0	1,457.67	73
J-144	1,280.00	0.0	1,457.53	77
J-145	1,280.00	0.0	1,457.53	77
J-146	1,284.22	0.0	1,457.60	75
J-147	1,284.23	0.0	1,457.60	75
J-148	1,282.74	0.0	1,457.20	75
J-149	1,282.75	0.0	1,457.20	75
J-150	1,282.53	0.0	1,457.60	76
J-151	1,282.57	0.0	1,457.60	76
J-152	1,300.00	0.0	1,457.67	68
J-153	1,300.00	0.0	1,457.67	68
J-154	1,300.00	0.0	1,457.67	68
J-155	1,300.00	0.0	1,457.67	68
J-160	1,285.34	0.0	1,457.60	75
J-161	1,285.38	0.0	1,457.60	75
J-162	1,300.00	0.0	1,457.68	68
J-163	1,300.00	0.0	1,457.68	68
J-164	1,287.53	0.0	1,457.68	74
J-165	1,287.55	0.0	1,457.68	74
J-166	1,284.46	0.0	1,457.37	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-167	1,284.51	5.0	1,457.37	75
J-170	1,280.00	0.0	1,457.19	77
J-173	1,283.43	0.0	1,457.67	75
J-174	1,283.62	0.0	1,457.67	75
J-179	1,293.02	0.0	1,457.59	71
J-180	1,293.00	7.0	1,457.59	71
J-181	1,280.00	0.0	1,457.51	77
J-182	1,280.00	0.0	1,457.51	77
J-183	1,280.00	5.0	1,457.65	77
J-184	1,280.00	0.0	1,457.65	77
J-185	1,282.23	0.0	1,457.60	76
J-186	1,282.18	0.0	1,457.60	76
J-187	1,294.21	0.0	1,457.60	71
J-188	1,294.19	0.0	1,457.60	71
J-189	1,286.00	0.0	1,457.46	74
J-190	1,285.95	4.0	1,457.46	74
J-193	1,290.04	0.0	1,457.60	72
J-195	1,287.68	0.0	1,457.67	74
J-196	1,287.66	0.0	1,457.67	74
J-197	1,283.22	0.0	1,457.35	75
J-198	1,283.22	0.0	1,457.35	75
J-199	1,288.46	0.0	1,457.68	73
J-200	1,288.48	0.0	1,457.68	73
J-203	1,282.25	0.0	1,457.34	76
J-204	1,282.24	5.0	1,457.34	76
J-205	1,288.69	0.0	1,457.67	73
J-212	1,290.41	0.0	1,457.51	72
J-213	1,290.38	8.0	1,457.51	72
J-214	1,295.27	0.0	1,457.41	70
J-215	1,295.85	0.0	1,457.67	70
J-216	1,295.80	0.0	1,457.67	70
J-217	1,288.26	0.0	1,457.68	73
J-218	1,288.29	0.0	1,457.68	73
J-219	1,288.80	3.0	1,457.68	73
J-220	1,288.83	0.0	1,457.68	73
J-221	1,294.52	17.0	1,457.24	70
J-222	1,294.50	0.0	1,457.23	70
J-227	1,280.00	0.0	1,457.53	77
J-232	1,286.38	0.0	1,457.67	74
J-233	1,286.35	0.0	1,457.68	74
J-234	1,282.61	10.0	1,457.21	76
J-235	1,282.14	0.0	1,457.60	76



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-236	1,282.11	0.0	1,457.60	76
J-239	1,282.11	0.0	1,457.60	76
J-240	1,290.00	0.0	1,457.60	73
J-241	1,290.00	0.0	1,457.60	73
J-242	1,290.00	0.0	1,457.60	73
J-243	1,290.00	0.0	1,457.60	73
J-252	1,282.06	0.0	1,457.67	76
J-253	1,282.03	0.0	1,457.67	76
J-254	1,291.78	0.0	1,457.60	72
J-255	1,291.80	0.0	1,457.60	72
J-256	1,290.00	0.0	1,457.60	73
J-257	1,282.23	0.0	1,457.60	76
J-259	1,283.04	0.0	1,457.67	76
J-260	1,282.85	0.0	1,457.67	76
J-261	1,286.03	0.0	1,457.68	74
J-262	1,286.06	5.0	1,457.68	74
J-263	1,290.00	0.0	1,457.60	73
J-264	1,282.88	0.0	1,457.20	75
J-265	1,282.80	5.0	1,457.20	75
J-266	1,282.32	0.0	1,457.60	76
J-271	1,300.00	7.0	1,457.67	68
J-272	1,300.00	0.0	1,457.67	68
J-273	1,282.48	3.0	1,457.20	76
J-274	1,282.44	0.0	1,457.20	76
J-276	1,287.84	0.0	1,457.60	73
J-277	1,287.86	0.0	1,457.60	73
J-278	1,282.73	0.0	1,457.20	75
J-279	1,282.74	0.0	1,457.20	75
J-280	1,288.87	0.0	1,457.67	73
J-281	1,286.24	0.0	1,457.68	74
J-282	1,287.88	0.0	1,457.60	73
J-284	1,289.28	0.0	1,457.63	73
J-285	1,289.33	0.0	1,457.64	73
J-286	1,298.92	5.0	1,457.67	69
J-287	1,298.85	0.0	1,457.67	69
J-290	1,285.77	0.0	1,457.68	74
J-291	1,286.38	0.0	1,457.68	74
J-292	1,300.00	0.0	1,457.67	68
J-293	1,300.00	0.0	1,457.67	68
J-294	1,300.00	0.0	1,457.67	68
J-295	1,300.00	0.0	1,457.67	68
J-296	1,300.00	0.0	1,457.67	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-297	1,300.00	0.0	1,457.67	68
J-298	1,287.88	0.0	1,457.60	73
J-299	1,291.84	0.0	1,457.60	72
J-302	1,300.00	0.0	1,457.67	68
J-305	1,287.21	0.0	1,457.61	74
J-306	1,287.32	0.0	1,457.61	74
J-307	1,288.89	0.0	1,457.67	73
J-311	1,300.00	0.0	1,457.67	68
J-312	1,299.91	1.0	1,457.67	68
J-314	1,282.43	0.0	1,457.60	76
J-315	1,282.43	0.0	1,457.60	76
J-321	1,300.00	0.0	1,457.67	68
J-322	1,300.00	0.0	1,457.67	68
J-323	1,286.23	0.0	1,457.68	74
J-324	1,286.30	0.0	1,457.68	74
J-325	1,286.06	0.0	1,457.68	74
J-326	1,286.10	0.0	1,457.68	74
J-327	1,300.00	0.0	1,457.67	68
J-330	1,287.12	0.0	1,457.68	74
J-333	1,290.06	0.0	1,457.62	72
J-334	1,290.00	0.0	1,457.61	73
J-336	1,299.05	0.0	1,457.40	69
J-337	1,299.07	0.0	1,457.40	69
J-338	1,300.00	0.0	1,457.68	68
J-339	1,300.00	0.0	1,457.68	68
J-340	1,287.48	0.0	1,457.68	74
J-341	1,287.57	0.0	1,457.68	74
J-342	1,300.00	0.0	1,457.67	68
J-345	1,288.34	0.0	1,457.68	73
J-346	1,285.59	0.0	1,457.68	74
J-347	1,300.00	3.0	1,457.68	68
J-348	1,300.00	0.0	1,457.68	68
J-349	1,293.78	0.0	1,457.60	71
J-350	1,293.92	0.0	1,457.60	71
J-355	1,286.32	0.0	1,457.68	74
J-356	1,280.00	0.0	1,457.45	77
J-357	1,280.00	6.0	1,457.45	77
J-358	1,281.00	0.0	1,457.34	76
J-359	1,281.04	0.0	1,457.34	76
J-361	1,282.53	0.0	1,457.20	76
J-362	1,282.60	6.0	1,457.20	76
J-363	1,300.00	0.0	1,457.67	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-364	1,300.00	0.0	1,457.67	68
J-365	1,290.00	2.0	1,457.63	73
J-366	1,290.00	0.0	1,457.63	73
J-367	1,286.28	0.0	1,457.67	74
J-368	1,286.34	0.0	1,457.67	74
J-369	1,290.00	0.0	1,457.63	73
J-370	1,290.00	0.0	1,457.63	73
J-371	1,280.00	0.0	1,457.49	77
J-372	1,280.00	0.0	1,457.49	77
J-373	1,290.21	0.0	1,457.62	72
J-374	1,290.16	0.0	1,457.62	72
J-375	1,288.34	0.0	1,457.60	73
J-377	1,290.00	0.0	1,457.61	73
J-378	1,290.00	0.0	1,457.61	73
J-382	1,300.00	0.0	1,457.67	68
J-383	1,300.00	0.0	1,457.68	68
J-384	1,300.00	0.0	1,457.69	68
J-385	1,294.82	0.0	1,457.60	70
J-386	1,294.65	0.0	1,457.60	71
J-387	1,293.18	0.0	1,457.60	71
J-389	1,280.00	6.0	1,457.42	77
J-390	1,280.00	0.0	1,457.42	77
J-391	1,293.13	0.0	1,457.60	71
J-393	1,300.00	0.0	1,457.68	68
J-394	1,299.97	0.0	1,457.68	68
J-395	1,300.00	0.0	1,457.67	68
J-396	1,300.00	0.0	1,457.67	68
J-397	1,289.50	0.0	1,457.64	73
J-398	1,286.59	0.0	1,457.68	74
J-399	1,286.50	0.0	1,457.68	74
J-400	1,293.77	0.0	1,457.60	71
J-401	1,293.66	0.0	1,457.59	71
J-402	1,288.43	0.0	1,457.68	73
J-403	1,287.92	0.0	1,457.68	73
J-404	1,287.79	0.0	1,457.68	74
J-405	1,300.00	0.0	1,457.67	68
J-406	1,300.00	0.0	1,457.67	68
J-407	1,299.84	0.0	1,457.67	68
J-408	1,299.64	0.0	1,457.67	68
J-409	1,289.66	0.0	1,457.67	73
J-410	1,289.78	0.0	1,457.67	73
J-411	1,300.00	0.0	1,457.67	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-412	1,300.00	0.0	1,457.67	68
J-413	1,300.00	0.0	1,457.67	68
J-414	1,286.64	0.0	1,457.69	74
J-415	1,287.00	0.0	1,457.69	74
J-416	1,293.68	0.0	1,457.60	71
J-417	1,299.52	0.0	1,457.67	68
J-418	1,289.42	5.0	1,457.67	73
J-419	1,289.36	0.0	1,457.67	73
J-421	1,290.23	0.0	1,457.61	72
J-422	1,290.24	0.0	1,457.60	72
J-423	1,293.26	0.0	1,457.60	71
J-425	1,294.44	7.0	1,457.60	71
J-426	1,293.12	0.0	1,457.60	71
J-427	1,293.03	0.0	1,457.60	71
J-428	1,294.24	0.0	1,457.60	71
J-429	1,294.04	0.0	1,457.60	71
J-430	1,286.20	0.0	1,457.68	74
J-431	1,286.36	0.0	1,457.66	74
J-432	1,286.47	0.0	1,457.66	74
J-434	1,286.19	0.0	1,457.68	74
J-435	1,287.44	5.0	1,457.68	74
J-436	1,280.00	0.0	1,457.49	77
J-437	1,282.31	0.0	1,457.20	76
J-438	1,287.29	0.0	1,457.65	74
J-439	1,287.36	0.0	1,457.65	74
J-440	1,290.00	0.0	1,457.62	73
J-441	1,290.00	0.0	1,457.62	73
J-442	1,290.00	0.0	1,457.60	73
J-443	1,290.00	0.0	1,457.60	73
J-444	1,288.18	0.0	1,457.60	73
J-446	1,294.31	0.0	1,457.60	71
J-447	1,290.00	1.0	1,457.61	73
J-448	1,287.18	0.0	1,457.60	74
J-449	1,287.13	0.0	1,457.60	74
J-450	1,285.92	0.0	1,457.60	74
J-451	1,285.80	0.0	1,457.60	74
J-453	1,284.32	0.0	1,457.60	75
J-454	1,284.01	0.0	1,457.60	75
J-456	1,290.26	0.0	1,457.61	72
J-457	1,286.15	0.0	1,457.68	74
J-458	1,300.00	0.0	1,457.67	68
J-459	1,300.00	0.0	1,457.67	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-460	1,280.00	0.0	1,457.51	77
J-461	1,280.00	0.0	1,457.49	77
J-462	1,287.98	0.0	1,457.68	73
J-463	1,287.94	0.0	1,457.68	73
J-464	1,300.00	0.0	1,457.67	68
J-465	1,300.00	0.0	1,457.68	68
J-466	1,282.42	0.0	1,457.60	76
J-467	1,288.08	3.0	1,457.68	73
J-468	1,288.27	0.0	1,457.68	73
J-469	1,283.38	0.0	1,457.60	75
J-470	1,283.23	0.0	1,457.60	75
J-471	1,299.01	0.0	1,457.67	69
J-472	1,287.57	0.0	1,457.68	74
J-473	1,287.52	0.0	1,457.68	74
J-475	1,287.67	0.0	1,457.68	74
J-476	1,282.27	0.0	1,457.34	76
J-477	1,281.94	0.0	1,457.35	76
J-478	1,300.00	0.0	1,457.67	68
J-479	1,299.86	0.0	1,457.67	68
J-480	1,299.61	3.0	1,457.67	68
J-483	1,298.69	2.0	1,457.40	69
J-484	1,300.00	0.0	1,457.67	68
J-485	1,288.36	0.0	1,457.60	73
J-487	1,280.00	0.0	1,457.64	77
J-489	1,280.82	0.0	1,457.65	77
J-491	1,280.00	0.0	1,457.64	77
J-492	1,280.00	0.0	1,457.64	77
J-496	1,286.29	0.0	1,457.68	74
J-498	1,287.40	0.0	1,457.68	74
J-499	1,282.76	0.0	1,457.20	75
J-500	1,280.00	0.0	1,457.49	77
J-501	1,286.30	0.0	1,457.66	74
J-502	1,286.55	0.0	1,457.66	74
J-504	1,286.78	0.0	1,457.68	74
J-505	1,287.22	0.0	1,457.68	74
J-506	1,287.19	0.0	1,457.69	74
J-509	1,284.54	0.0	1,457.68	75
J-510	1,285.23	0.0	1,457.68	75
J-511	1,299.59	0.0	1,457.67	68
J-512	1,280.00	0.0	1,457.55	77
J-513	1,285.85	0.0	1,457.68	74
J-514	1,286.50	0.0	1,457.68	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-516	1,290.00	4.0	1,457.67	73
J-518	1,285.84	0.0	1,457.68	74
J-519	1,290.31	0.0	1,457.61	72
J-520	1,293.47	7.0	1,457.57	71
J-524	1,281.77	0.0	1,457.67	76
J-526	1,287.21	0.0	1,457.68	74
J-528	1,289.60	0.0	1,457.67	73
J-531	1,281.18	0.0	1,457.66	76
J-532	1,287.52	0.0	1,457.60	74
J-533	1,294.10	0.0	1,457.60	71
J-534	1,293.74	0.0	1,457.60	71
J-535	1,287.45	0.0	1,457.68	74
J-536	1,287.54	0.0	1,457.68	74
J-537	1,288.06	0.0	1,457.67	73
J-543	1,285.32	0.0	1,457.60	75
J-544	1,290.00	2.0	1,457.67	73
J-546	1,286.30	0.0	1,457.67	74
J-547	1,281.20	3.0	1,457.35	76
J-550	1,288.60	0.0	1,457.67	73
J-551	1,289.52	4.0	1,457.67	73
J-552	1,299.98	0.0	1,457.67	68
J-557	1,284.17	0.0	1,457.60	75
J-558	1,282.88	0.0	1,457.20	75
J-559	1,282.73	0.0	1,457.20	75
J-560	1,282.06	2.0	1,457.34	76
J-561	1,283.24	5.0	1,457.35	75
J-562	1,286.82	0.0	1,457.69	74
J-563	1,290.00	0.0	1,457.60	73
J-565	1,285.36	0.0	1,457.39	74
J-568	1,287.63	0.0	1,457.68	74
J-571	1,293.10	0.0	1,457.60	71
J-572	1,282.00	0.0	1,457.34	76
J-573	1,292.36	1.0	1,457.67	72
J-578	1,294.30	2.0	1,457.67	71
J-579	1,280.00	0.0	1,457.64	77
J-580	1,290.00	0.0	1,457.60	73
J-581	1,287.61	6.0	1,457.68	74
J-582	1,280.00	0.0	1,457.46	77
J-583	1,286.49	0.0	1,457.68	74
J-585	1,290.00	7.0	1,457.59	73
J-587	1,293.57	8.0	1,457.21	71
J-588	1,296.06	3.0	1,457.42	70



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-590	1,284.18	7.0	1,457.47	75
J-591	1,293.46	16.0	1,457.20	71
J-592	1,290.15	0.0	1,457.61	72
J-593	1,290.05	0.0	1,457.61	72
J-594	1,280.96	0.0	1,457.20	76
J-596	1,287.73	0.0	1,457.68	74
J-597	1,280.52	0.0	1,457.60	77
J-598	1,283.73	0.0	1,457.67	75
J-599	1,282.35	0.0	1,457.67	76
J-600	1,289.29	2.0	1,457.63	73
J-602	1,280.00	0.0	1,457.63	77
J-605	1,280.25	9.0	1,457.35	77
J-606	1,280.72	3.0	1,457.35	76
J-607	1,282.85	0.0	1,457.67	76
J-608	1,289.62	0.0	1,457.60	73
J-609	1,284.63	3.0	1,457.37	75
J-610	1,298.28	0.0	1,457.68	69
J-613	1,287.22	3.0	1,457.68	74
J-614	1,286.42	1.0	1,457.65	74
J-615	1,284.29	0.0	1,457.41	75
J-616	1,287.06	14.0	1,457.41	74
J-617	1,294.88	3.0	1,457.67	70
J-618	1,297.09	0.0	1,457.67	69
J-619	1,291.42	0.0	1,457.60	72
J-620	1,280.00	0.0	1,457.60	77
J-621	1,289.98	15.0	1,457.24	72
J-622	1,288.84	15.0	1,457.31	73
J-623	1,287.65	0.0	1,457.60	74
J-624	1,294.76	0.0	1,457.60	70
J-625	1,287.04	0.0	1,457.61	74
J-626	1,300.00	0.0	1,457.67	68
J-627	1,280.00	0.0	1,457.60	77
J-628	1,282.30	0.0	1,457.60	76
J-629	1,287.12	5.0	1,457.60	74
J-630	1,287.21	5.0	1,457.61	74
J-632	1,287.88	10.0	1,457.47	73
J-633	1,285.82	5.0	1,457.46	74
J-635	1,300.00	0.0	1,457.67	68
J-638	1,293.02	0.0	1,457.67	71
J-639	1,293.71	0.0	1,457.60	71
J-640	1,293.11	0.0	1,457.60	71
J-641	1,293.07	0.0	1,457.60	71



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-642	1,290.16	0.0	1,457.61	72
J-643	1,290.00	0.0	1,457.67	73
J-646	1,287.37	0.0	1,457.67	74
J-647	1,290.63	16.0	1,457.42	72
J-648	1,283.82	4.0	1,457.45	75
J-649	1,289.38	0.0	1,457.67	73
J-651	1,290.10	5.0	1,457.43	72
J-652	1,289.27	0.0	1,457.63	73
J-656	1,293.63	10.0	1,457.44	71
J-657	1,296.44	9.0	1,457.42	70
J-658	1,294.35	10.0	1,457.38	71
J-661	1,300.00	0.0	1,457.67	68
J-662	1,287.37	0.0	1,457.67	74
J-664	1,300.00	5.0	1,457.67	68
J-665	1,298.00	9.0	1,457.43	69
J-667	1,282.25	0.0	1,457.60	76
J-673	1,294.74	0.0	1,457.60	70
J-1	1,280.00	0.0	1,457.60	77
J-2	1,280.00	0.0	1,457.60	77
J-5	1,280.32	0.0	1,457.60	77
J-6	1,280.33	0.0	1,457.60	77
J-7	1,280.26	0.0	1,457.60	77
J-8	1,280.27	0.0	1,457.60	77
J-9	1,280.00	0.0	1,457.60	77
J-10	1,280.00	0.0	1,457.60	77
J-13	1,280.00	0.0	1,457.60	77
J-14	1,280.00	0.0	1,457.60	77
J-15	1,280.00	0.0	1,457.60	77
J-16	1,280.00	0.0	1,457.60	77
J-17	1,280.00	0.0	1,457.60	77
J-18	1,280.00	0.0	1,457.60	77
J-19	1,280.00	0.0	1,457.60	77
J-20	1,280.00	0.0	1,457.60	77
J-21	1,280.00	0.0	1,457.63	77
J-22	1,280.00	0.0	1,457.63	77
J-23	1,280.20	0.0	1,457.60	77
J-24	1,280.23	0.0	1,457.60	77
J-33	1,280.00	0.0	1,457.60	77
J-34	1,280.00	0.0	1,457.60	77
J-43	1,280.00	0.0	1,457.60	77
J-44	1,280.00	0.0	1,457.60	77
J-47	1,280.00	0.0	1,457.60	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-48	1,280.00	0.0	1,457.60	77
J-49	1,280.29	0.0	1,457.60	77
J-50	1,280.32	0.0	1,457.60	77
J-51	1,283.91	0.0	1,457.60	75
J-52	1,283.91	0.0	1,457.60	75
J-53	1,281.92	0.0	1,457.60	76
J-54	1,281.95	0.0	1,457.60	76
J-55	1,280.00	0.0	1,457.60	77
J-56	1,280.00	0.0	1,457.60	77
J-61	1,280.00	0.0	1,457.55	77
J-62	1,280.00	0.0	1,457.55	77
J-63	1,280.00	0.0	1,457.62	77
J-64	1,280.00	0.0	1,457.62	77
J-65	1,280.00	0.0	1,457.63	77
J-66	1,280.00	0.0	1,457.63	77
J-67	1,280.00	0.0	1,457.60	77
J-68	1,280.00	0.0	1,457.60	77
J-69	1,280.00	0.0	1,457.60	77
J-70	1,280.00	0.0	1,457.60	77
J-71	1,280.00	0.0	1,457.60	77
J-72	1,280.00	0.0	1,457.60	77
J-73	1,280.00	0.0	1,457.60	77
J-74	1,280.00	0.0	1,457.60	77
J-77	1,280.00	0.0	1,457.60	77
J-78	1,280.00	0.0	1,457.60	77
J-81	1,280.00	0.0	1,457.60	77
J-82	1,280.00	0.0	1,457.60	77
J-85	1,280.00	0.0	1,457.60	77
J-86	1,280.00	0.0	1,457.60	77
J-91	1,280.00	0.0	1,457.57	77
J-101	1,280.00	0.0	1,457.60	77
J-102	1,280.00	0.0	1,457.60	77
J-106	1,280.00	0.0	1,457.60	77
J-107	1,280.00	0.0	1,457.60	77
J-120	1,280.41	0.0	1,457.60	77
J-121	1,280.41	0.0	1,457.60	77
J-125	1,280.00	0.0	1,457.60	77
J-126	1,280.00	0.0	1,457.60	77
J-129	1,286.89	0.0	1,457.60	74
J-131	1,280.34	0.0	1,457.60	77
J-132	1,280.25	0.0	1,457.60	77
J-137	1,280.00	0.0	1,457.60	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-138	1,280.00	0.0	1,457.60	77
J-139	1,280.00	0.0	1,457.60	77
J-140	1,280.00	0.0	1,457.60	77
J-142	1,280.00	0.0	1,457.60	77
J-143	1,280.00	0.0	1,457.60	77
J-150	1,280.00	0.0	1,457.60	77
J-151	1,280.00	0.0	1,457.60	77
J-152	1,280.00	0.0	1,457.60	77
J-153	1,280.00	0.0	1,457.60	77
J-154	1,280.00	0.0	1,457.60	77
J-155	1,280.00	0.0	1,457.60	77
J-156	1,280.00	0.0	1,457.60	77
J-157	1,280.00	0.0	1,457.60	77
J-163	1,280.00	0.0	1,457.61	77
J-164	1,280.00	0.0	1,457.61	77
J-165	1,280.00	0.0	1,457.60	77
J-166	1,280.00	0.0	1,457.60	77
J-167	1,280.00	0.0	1,457.64	77
J-168	1,280.00	0.0	1,457.60	77
J-169	1,280.00	0.0	1,457.60	77
J-171	1,280.00	0.0	1,457.60	77
J-172	1,280.00	0.0	1,457.60	77
J-177	1,280.00	0.0	1,457.60	77
J-178	1,280.00	0.0	1,457.60	77
J-181	1,284.14	0.0	1,457.60	75
J-185	1,280.00	0.0	1,457.60	77
J-186	1,280.00	0.0	1,457.60	77
J-189	1,280.00	0.0	1,457.60	77
J-190	1,280.00	0.0	1,457.60	77
J-191	1,280.00	0.0	1,457.60	77
J-192	1,280.00	0.0	1,457.60	77
J-193	1,280.00	0.0	1,457.60	77
J-194	1,280.00	0.0	1,457.60	77
J-195	1,280.46	0.0	1,457.60	77
J-196	1,280.32	0.0	1,457.60	77
J-197	1,283.77	0.0	1,457.60	75
J-200	1,280.00	0.0	1,457.60	77
J-201	1,280.00	0.0	1,457.60	77
J-202	1,280.09	0.0	1,457.60	77
J-203	1,280.00	0.0	1,457.60	77
J-204	1,280.11	0.0	1,457.60	77
J-209	1,280.12	0.0	1,457.60	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-210	1,280.00	0.0	1,457.60	77
J-212	1,280.00	0.0	1,457.60	77
J-213	1,280.00	0.0	1,457.60	77
J-214	1,280.00	0.0	1,457.60	77
J-215	1,280.00	0.0	1,457.60	77
J-222	1,280.21	0.0	1,457.60	77
J-223	1,280.00	0.0	1,457.60	77
J-224	1,280.00	0.0	1,457.60	77
J-225	1,280.00	0.0	1,457.60	77
J-226	1,280.00	0.0	1,457.60	77
J-227	1,280.00	0.0	1,457.60	77
J-229	1,284.25	0.0	1,457.60	75
J-231	1,280.00	0.0	1,457.60	77
J-232	1,285.15	0.0	1,457.60	75
J-233	1,285.17	0.0	1,457.60	75
J-235	1,281.81	0.0	1,457.60	76
J-237	1,283.17	0.0	1,457.60	75
J-239	1,285.61	0.0	1,457.60	74
J-242	1,286.43	0.0	1,457.60	74
J-244	1,280.00	0.0	1,457.60	77
J-245	1,280.00	0.0	1,457.60	77
J-246	1,280.00	0.0	1,457.59	77
J-247	1,280.00	0.0	1,457.58	77
J-250	1,283.79	0.0	1,457.60	75
J-254	1,280.26	0.0	1,457.60	77
J-255	1,280.53	0.0	1,457.60	77
J-260	1,280.00	0.0	1,457.60	77
J-262	1,280.08	0.0	1,457.60	77
J-263	1,280.02	0.0	1,457.60	77
J-266	1,280.00	0.0	1,457.55	77
J-268	1,280.56	0.0	1,457.60	77
J-270	1,280.00	0.0	1,457.60	77
J-272	1,285.07	0.0	1,457.60	75
J-276	1,280.00	0.0	1,457.60	77
J-277	1,280.00	0.0	1,457.60	77
J-282	1,283.67	0.0	1,457.60	75
J-284	1,280.00	0.0	1,457.60	77
J-287	1,280.00	0.0	1,457.60	77
J-291	1,280.00	0.0	1,457.63	77
J-293	1,280.00	0.0	1,457.61	77
J-296	1,280.00	0.0	1,457.60	77
J-297	1,280.00	0.0	1,457.61	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-298	1,280.00	0.0	1,457.60	77
J-301	1,280.00	0.0	1,457.60	77
J-302	1,280.00	0.0	1,457.60	77
J-312	1,280.00	0.0	1,457.60	77
J-321	1,280.00	0.0	1,457.60	77
J-322	1,280.00	0.0	1,457.60	77
J-324	1,280.00	0.0	1,457.63	77
J-325	1,280.00	0.0	1,457.62	77
J-326	1,280.00	0.0	1,457.56	77
J-327	1,280.00	0.0	1,457.60	77
J-331	1,280.00	0.0	1,457.60	77
J-332	1,280.00	0.0	1,457.60	77
J-336	1,280.00	0.0	1,457.60	77
J-340	1,280.00	0.0	1,457.60	77
J-343	1,280.00	0.0	1,457.60	77
J-349	1,280.00	0.0	1,457.60	77
J-353	1,280.00	0.0	1,457.60	77
J-355	1,280.00	0.0	1,457.60	77
J-363	1,280.00	0.0	1,457.60	77
J-365	1,280.00	0.0	1,457.60	77
J-366	1,280.55	0.0	1,457.60	77
J-367	1,280.00	0.0	1,457.60	77
J-370	1,280.00	0.0	1,457.60	77
J-372	1,280.00	0.0	1,457.60	77
J-373	1,280.00	0.0	1,457.60	77
J-375	1,280.00	0.0	1,457.60	77
J-378	1,280.00	0.0	1,457.62	77
J-380	1,291.16	9.0	1,457.57	72
J-381	1,290.64	7.0	1,457.51	72
J-382	1,291.34	2.0	1,457.49	72
J-383	1,292.53	9.0	1,457.47	71
J-384	1,293.13	5.0	1,457.49	71
J-385	1,291.24	6.0	1,457.51	72
J-386	1,292.88	4.0	1,457.45	71
J-387	1,290.03	5.0	1,457.61	73
J-388	1,295.17	11.0	1,457.39	70
J-389	1,298.00	6.0	1,457.53	69
J-391	1,296.18	11.0	1,457.42	70
J-392	1,299.02	9.0	1,457.53	69
J-394	1,298.41	9.0	1,457.55	69
J-397	1,290.98	15.0	1,457.23	72
J-398	1,287.47	10.0	1,457.48	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-401	1,294.11	0.0	1,457.60	71
J-403	1,296.44	0.0	1,457.42	70
J-404	1,300.00	0.0	1,457.67	68
J-405	1,287.46	0.0	1,457.68	74
J-408	1,297.02	0.0	1,457.67	70
J-410	1,287.47	0.0	1,457.42	74
J-412	1,287.12	0.0	1,457.47	74
J-414	1,282.85	0.0	1,457.20	75
J-421	1,300.00	0.0	1,457.67	68
J-432	1,296.44	0.0	1,457.42	70



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
1907	1,015	J-661	J-626	30	Ductile Iron	130	0.0	71.00	0.0300
1908	62	J-464	J-465	12	Ductile Iron	130	0.0	-71.00	0.2000
3565	8	J-166	J-167	6	Ductile Iron	130	0.0	0.00	0.0000
3566	6	J-105	J-106	6	Ductile Iron	130	0.0	0.00	0.0000
3961	6	J-93	J-94	6	Ductile Iron	130	0.0	0.00	0.0000
3962	49	J-15	J-326	16	Ductile Iron	130	0.0	2.00	0.0000
3963	2	J-15	J-16	16	Ductile Iron	130	0.0	-2.00	0.0000
3983	526	J-573	J-544	8	Ductile Iron	130	0.0	2.00	0.0100
4153	512	J-618	J-610	8	Ductile Iron	130	0.0	-6.00	0.0400
4154	14	J-215	J-216	6	Ductile Iron	130	0.0	0.00	0.0000
4308	289	J-585	J-78	6	Ductile Iron	130	0.0	-7.00	0.0800
4311	9	J-189	J-190	6	Ductile Iron	130	0.0	0.00	0.0000
4312	305	J-222	J-587	6	Ductile Iron	130	0.0	23.00	0.2700
8447	57	J-68	J-342	16	Ductile Iron	130	0.0	0.00	0.0000
8449	40	J-382	J-67	16	Ductile Iron	130	0.0	-26.00	0.0400
8823	20	J-302	J-70	12	Ductile Iron	130	0.0	0.00	0.0000
8825	75	J-478	J-322	12	Ductile Iron	130	0.0	-45.00	0.1300
12390	66	J-465	J-393	12	Ductile Iron	130	0.0	6.00	0.0200
12392	31	J-338	J-339	6	Ductile Iron	130	0.0	0.00	0.0000
12393	297	J-411	J-363	12	Ductile Iron	130	0.0	35.00	0.1000
12395	981	J-221	J-657	6	Ductile Iron	130	0.0	-39.00	0.4500
12397	682	J-367	J-646	6	Ductile Iron	130	0.0	6.00	0.0700
12398	4	J-32	J-33	6	Ductile Iron	130	0.0	0.00	0.0000
12400	159	J-550	J-551	6	Ductile Iron	130	0.0	4.00	0.0400
12401	236	J-550	J-32	6	Ductile Iron	130	0.0	-11.00	0.1200
12402	1,024	J-502	J-550	6	Ductile Iron	130	0.0	-7.00	0.0800
14457	1,098	J-476	J-359	6	Ductile Iron	130	0.0	3.00	0.0300
14458	206	J-561	J-476	6	Ductile Iron	130	0.0	12.00	0.1400
14459	34	J-358	J-359	6	Ductile Iron	130	0.0	0.00	0.0000
14460	442	J-204	J-129	6	Ductile Iron	130	0.0	-4.00	0.0500
14461	11	J-203	J-204	6	Ductile Iron	130	0.0	0.00	0.0000
14462	7	J-128	J-129	6	Ductile Iron	130	0.0	0.00	0.0000
14463	11	J-197	J-198	6	Ductile Iron	130	0.0	0.00	0.0000
14465	447	J-565	J-561	6	Ductile Iron	130	0.0	26.00	0.3000
14466	630	J-106	J-167	6	Ductile Iron	130	0.0	9.00	0.1000
14467	610	J-284	J-136	6	Ductile Iron	130	0.0	47.00	0.5300
14477	525	J-624	J-533	6	Ductile Iron	130	0.0	3.00	0.0400
14478	694	J-27	J-425	6	Ductile Iron	130	0.0	-9.00	0.1000
14479	657	J-639	J-640	6	Ductile Iron	130	0.0	-4.00	0.0500
14481	658	J-641	J-642	6	Ductile Iron	130	0.0	-7.00	0.0800
14483	8	J-179	J-180	6	Ductile Iron	130	0.0	0.00	0.0000
14484	10	J-212	J-213	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
14485	5	J-81	J-82	6	Ductile Iron	130	0.0	0.00	0.0000
14486	3	J-26	J-27	6	Ductile Iron	130	0.0	0.00	0.0000
14487	3	J-24	J-25	6	Ductile Iron	130	0.0	0.00	0.0000
14488	4	J-30	J-31	6	Ductile Iron	130	0.0	0.00	0.0000
14494	1,330	J-646	J-501	6	Ductile Iron	130	0.0	6.00	0.0700
14496	26	J-325	J-326	6	Ductile Iron	130	0.0	0.00	0.0000
19501	5	J-23	J-24	16	Ductile Iron	130	0.0	0.00	0.0000
19507	15	J-120	J-121	16	Ductile Iron	130	0.0	-7.00	0.0100
19510	5	J-19	J-20	12	Ductile Iron	130	0.0	0.00	0.0000
19511	5	J-17	J-18	12	Ductile Iron	130	0.0	0.00	0.0000
19512	366	J-19	J-17	16	Ductile Iron	130	0.0	-7.00	0.0100
19514	5	J-15	J-16	12	Ductile Iron	130	0.0	0.00	0.0000
19515	413	J-15	J-298	16	Ductile Iron	130	0.0	-7.00	0.0100
19516	88	J-298	J-185	16	Ductile Iron	130	0.0	-7.00	0.0100
19517	25	J-185	J-186	16	Ductile Iron	130	0.0	-7.00	0.0100
19520	39	J-186	J-231	16	Ductile Iron	130	0.0	-7.00	0.0100
19522	25	J-189	J-190	12	Ductile Iron	130	0.0	-7.00	0.0200
19526	2	J-7	J-8	0.8	Ductile Iron	130	0.0	0.00	0.0000
19527	2	J-5	J-6	0.8	Ductile Iron	130	0.0	0.00	0.0000
21371	649	J-385	J-400	16	Ductile Iron	130	0.0	-25.00	0.0400
21372	659	J-426	J-421	16	Ductile Iron	130	0.0	-94.00	0.1500
21374	349	J-439	J-432	16	Ductile Iron	130	0.0	-194.00	0.3100
21395	53	J-428	J-429	6	Ductile Iron	130	0.0	0.00	0.0000
21709	365	J-435	J-504	16	Ductile Iron	130	0.0	75.00	0.1200
21710	85	J-496	J-355	16	Ductile Iron	130	0.0	11.00	0.0200
21711	37	J-367	J-368	6	Ductile Iron	130	0.0	0.00	0.0000
21712	13	J-232	J-233	6	Ductile Iron	130	0.0	-56.00	0.6400
21713	16	J-261	J-262	6	Ductile Iron	130	0.0	8.00	0.0900
21714	4	J-4	J-5	6	Ductile Iron	130	0.0	11.00	0.1200
21715	1	J-6	J-7	16	Ductile Iron	130	0.0	0.00	0.0000
21716	6	J-115	J-116	6	Ductile Iron	130	0.0	-460.00	5.2200
21717	1	J-1	J-3	16	Ductile Iron	130	0.0	0.00	0.0000
21718	1	J-1	J-2	16	Ductile Iron	130	0.0	0.00	0.0000
21719	26	J-323	J-324	6	Ductile Iron	130	0.0	0.00	0.0000
21720	20	J-284	J-285	6	Ductile Iron	130	0.0	-49.00	0.5600
21722	53	J-440	J-441	6	Ductile Iron	130	0.0	0.00	0.0000
21723	38	J-369	J-370	6	Ductile Iron	130	0.0	0.00	0.0000
21724	29	J-333	J-334	6	Ductile Iron	130	0.0	12.00	0.1300
24188	60	J-458	J-459	6	Ductile Iron	130	0.0	0.00	0.0000
24513	20	J-294	J-295	8	Ductile Iron	130	0.0	-1.00	0.0100
24514	20	J-296	J-297	8	Ductile Iron	130	0.0	-3.00	0.0200
24515	45	J-405	J-411	8	Ductile Iron	130	0.0	-3.00	0.0200

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
24516	45	J-412	J-413	8	Ductile Iron	130	0.0	-3.00	0.0200
24517	300	J-294	J-312	8	Ductile Iron	130	0.0	1.00	0.0100
24518	303	J-296	J-479	8	Ductile Iron	130	0.0	3.00	0.0200
24519	22	J-311	J-312	6	Ductile Iron	130	0.0	0.00	0.0000
24520	74	J-479	J-480	8	Ductile Iron	130	0.0	3.00	0.0200
25253	4	J-56	J-57	6	Ductile Iron	130	0.0	0.00	0.0000
25254	6	J-36	J-37	6	Ductile Iron	130	0.0	-5.00	0.0600
25255	6	J-87	J-88	6	Ductile Iron	130	0.0	0.00	0.0000
25256	5	J-52	J-53	6	Ductile Iron	130	0.0	0.00	0.0000
25257	5	J-65	J-66	6	Ductile Iron	130	0.0	0.00	0.0000
25258	5	J-85	J-86	6	Ductile Iron	130	0.0	0.00	0.0000
25283	7	J-154	J-155	4	Ductile Iron	130	0.0	0.00	0.0000
25284	7	J-152	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
25564	299	J-588	J-214	6	Ductile Iron	130	0.0	13.00	0.1500
25565	445	J-107	J-13	6	Ductile Iron	130	0.0	-9.00	0.1100
25566	6	J-107	J-108	6	Ductile Iron	130	0.0	0.00	0.0000
25595	7	J-77	J-78	6	Ductile Iron	130	0.0	0.00	0.0000
27024	49	J-254	J-255	16	Ductile Iron	130	0.0	7.00	0.0100
27025	34	J-23	J-222	16	Ductile Iron	130	0.0	0.00	0.0000
27504	117	J-393	J-162	8	Ductile Iron	130	0.0	0.00	0.0000
27505	10	J-162	J-163	6	Ductile Iron	130	0.0	0.00	0.0000
27906	504	J-281	J-505	8	Ductile Iron	130	0.0	5.00	0.0300
27908	632	J-505	J-402	8	Ductile Iron	130	0.0	5.00	0.0300
27909	12	J-199	J-200	6	Ductile Iron	130	0.0	0.00	0.0000
28144	138	J-516	J-544	8	Ductile Iron	130	0.0	0.00	0.0000
29987	75	J-483	J-336	6	Ductile Iron	130	0.0	0.00	0.0000
29988	30	J-336	J-337	6	Ductile Iron	130	0.0	0.00	0.0000
30003	6	J-69	J-70	12	Ductile Iron	130	0.0	0.00	0.0000
30004	115	J-526	J-462	8	Ductile Iron	130	0.0	0.00	0.0000
30005	310	J-583	J-526	16	Ductile Iron	130	0.0	65.00	0.1000
30006	273	J-537	J-205	16	Ductile Iron	130	0.0	58.00	0.0900
30007	9	J-195	J-196	6	Ductile Iron	130	0.0	-11.00	0.1200
30009	45	J-409	J-410	6	Ductile Iron	130	0.0	0.00	0.0000
30010	683	J-205	J-643	16	Ductile Iron	130	0.0	48.00	0.0800
30011	647	J-643	J-22	16	Ductile Iron	130	0.0	-21.00	0.0300
30012	3	J-22	J-23	12	Ductile Iron	130	0.0	3.00	0.0100
30015	640	J-22	J-638	16	Ductile Iron	130	0.0	-24.00	0.0400
30017	3	J-20	J-21	8	Ductile Iron	130	0.0	0.00	0.0000
30021	617	J-635	J-484	16	Ductile Iron	130	0.0	-26.00	0.0400
30023	21	J-292	J-293	6	Ductile Iron	130	0.0	0.00	0.0000
30389	117	J-524	J-531	12	Ductile Iron	130	0.0	84.00	0.2400
30390	19	J-252	J-253	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30392	88	J-499	J-278	6	Ductile Iron	130	0.0	0.00	0.0000
30393	435	J-599	J-607	16	Ductile Iron	130	0.0	-84.00	0.1300
30394	14	J-259	J-260	6	Ductile Iron	130	0.0	0.00	0.0000
30395	8	J-173	J-174	6	Ductile Iron	130	0.0	0.00	0.0000
30397	358	J-598	J-509	16	Ductile Iron	130	0.0	-84.00	0.1300
30398	98	J-509	J-510	6	Ductile Iron	130	0.0	0.00	0.0000
30399	398	J-509	J-346	16	Ductile Iron	130	0.0	-84.00	0.1300
30400	105	J-346	J-518	16	Ductile Iron	130	0.0	59.00	0.0900
30401	102	J-513	J-514	6	Ductile Iron	130	0.0	0.00	0.0000
40954	162	J-407	J-552	8	Ductile Iron	130	0.0	2.00	0.0100
40955	166	J-511	J-412	8	Ductile Iron	130	0.0	-3.00	0.0200
40956	54	J-407	J-408	6	Ductile Iron	130	0.0	0.00	0.0000
40957	6	J-117	J-118	6	Ductile Iron	130	0.0	0.00	0.0000
40958	19	J-286	J-287	6	Ductile Iron	130	0.0	0.00	0.0000
44165	278	J-79	J-28	6	Ductile Iron	130	0.0	42.00	0.4700
44167	5	J-79	J-80	6	Ductile Iron	130	0.0	0.00	0.0000
44168	5	J-75	J-76	6	Ductile Iron	130	0.0	0.00	0.0000
44169	8	J-35	J-170	6	Ductile Iron	130	0.0	0.00	0.0000
45230	35	J-190	J-223	12	Ductile Iron	130	0.0	-7.00	0.0200
45231	13	J-106	J-107	1	Ductile Iron	130	0.0	0.00	0.0000
45232	8	J-67	J-68	6	Ductile Iron	130	0.0	0.00	0.0000
45234	8	J-69	J-70	6	Ductile Iron	130	0.0	0.00	0.0000
45236	22	J-165	J-166	12	Ductile Iron	130	0.0	-8.00	0.0200
45237	293	J-166	J-363	12	Ductile Iron	130	0.0	-8.00	0.0200
45238	10	J-81	J-82	6	Ductile Iron	130	0.0	0.00	0.0000
45239	8	J-73	J-74	6	Ductile Iron	130	0.0	0.00	0.0000
45241	22	J-168	J-169	12	Ductile Iron	130	0.0	-8.00	0.0200
45242	148	J-169	J-296	12	Ductile Iron	130	0.0	-8.00	0.0200
45245	10	J-77	J-78	6	Ductile Iron	130	0.0	0.00	0.0000
45247	89	J-301	J-302	6	Ductile Iron	130	0.0	0.00	0.0000
45248	106	J-321	J-246	8	Ductile Iron	130	0.0	71.00	0.4500
45249	8	J-71	J-72	6	Ductile Iron	130	0.0	0.00	0.0000
45251	13	J-101	J-102	1	Ductile Iron	130	0.0	0.00	0.0000
45252	85	J-297	J-163	12	Ductile Iron	130	0.0	-79.00	0.2200
45253	22	J-163	J-164	12	Ductile Iron	130	0.0	-79.00	0.2200
45257	8	J-63	J-64	6	Ductile Iron	130	0.0	0.00	0.0000
45260	5	J-21	J-22	1	Ductile Iron	130	0.0	0.00	0.0000
45261	107	J-324	J-602	8	Ductile Iron	130	0.0	0.00	0.0000
45262	8	J-65	J-66	6	Ductile Iron	130	0.0	0.00	0.0000
45263	277	J-65	J-167	12	Ductile Iron	130	0.0	-79.00	0.2200
45264	22	J-167	J-579	12	Ductile Iron	130	0.0	-79.00	0.2200
45268	9	J-183	J-184	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
45271	5	J-73	J-74	1	Ductile Iron	130	0.0	0.00	0.0000
45410	41	J-377	J-378	6	Ductile Iron	130	0.0	0.00	0.0000
45970	15	J-264	J-265	6	Ductile Iron	130	0.0	5.00	0.0600
45972	7	J-136	J-137	6	Ductile Iron	130	0.0	0.00	0.0000
45973	37	J-365	J-366	6	Ductile Iron	130	0.0	0.00	0.0000
45975	38	J-373	J-374	6	Ductile Iron	130	0.0	0.00	0.0000
45998	55	J-61	J-266	8	Ductile Iron	130	0.0	0.00	0.0000
45999	7	J-61	J-62	8	Ductile Iron	130	0.0	0.00	0.0000
47269	114	J-512	J-227	8	Ductile Iron	130	0.0	71.00	0.4500
47271	9	J-144	J-145	6	Ductile Iron	130	0.0	0.00	0.0000
47272	140	J-144	J-181	8	Ductile Iron	130	0.0	71.00	0.4500
47273	9	J-181	J-182	8	Ductile Iron	130	0.0	0.00	0.0000
47274	60	J-181	J-460	8	Ductile Iron	130	0.0	0.00	0.0000
47275	37	J-371	J-372	6	Ductile Iron	130	0.0	0.00	0.0000
47276	93	J-371	J-500	8	Ductile Iron	130	0.0	0.00	0.0000
47278	41	J-389	J-390	8	Ductile Iron	130	0.0	0.00	0.0000
47279	672	J-389	J-547	8	Ductile Iron	130	0.0	59.00	0.3700
47305	50	J-355	J-430	8	Ductile Iron	130	0.0	4.00	0.0300
47310	52	J-435	J-40	8	Ductile Iron	130	0.0	0.00	0.0000
47311	4	J-40	J-41	6	Ductile Iron	130	0.0	0.00	0.0000
47325	96	J-398	J-504	8	Ductile Iron	130	0.0	0.00	0.0000
47327	42	J-398	J-399	6	Ductile Iron	130	0.0	0.00	0.0000
48023	23	J-177	J-178	6	Ductile Iron	130	0.0	0.00	0.0000
48024	140	J-343	J-150	8	Ductile Iron	130	0.0	0.00	0.0000
48025	20	J-150	J-151	8	Ductile Iron	130	0.0	0.00	0.0000
48027	2	J-9	J-10	8	Ductile Iron	130	0.0	0.00	0.0000
48028	16	J-125	J-126	6	Ductile Iron	130	0.0	0.00	0.0000
48211	7	J-138	J-139	6	Ductile Iron	130	0.0	0.00	0.0000
48212	7	J-140	J-141	6	Ductile Iron	130	0.0	0.00	0.0000
48213	20	J-305	J-306	6	Ductile Iron	130	0.0	0.00	0.0000
55557	98	J-276	J-277	12	Ductile Iron	130	0.0	2.00	0.0000
55562	20	J-152	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
55563	19	J-142	J-143	6	Ductile Iron	130	0.0	0.00	0.0000
55564	50	J-260	J-194	8	Ductile Iron	130	0.0	0.00	0.0000
55565	18	J-137	J-138	8	Ductile Iron	130	0.0	0.00	0.0000
55569	26	J-204	J-132	8	Ductile Iron	130	0.0	0.00	0.0000
55570	17	J-131	J-132	8	Ductile Iron	130	0.0	0.00	0.0000
55571	28	J-209	J-210	6	Ductile Iron	130	0.0	0.00	0.0000
55572	26	J-202	J-203	8	Ductile Iron	130	0.0	0.00	0.0000
55574	55	J-597	J-268	8	Ductile Iron	130	0.0	0.00	0.0000
55575	26	J-195	J-196	8	Ductile Iron	130	0.0	0.00	0.0000
55577	9	J-55	J-56	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
55578	8	J-49	J-50	6	Ductile Iron	130	0.0	0.00	0.0000
55979	260	J-448	J-450	12	Ductile Iron	130	0.0	-2.00	0.0000
55980	56	J-450	J-451	8	Ductile Iron	130	0.0	0.00	0.0000
55981	56	J-448	J-449	8	Ductile Iron	130	0.0	0.00	0.0000
55982	8	J-134	J-135	6	Ductile Iron	130	0.0	0.00	0.0000
55983	258	J-543	J-453	12	Ductile Iron	130	0.0	-2.00	0.0000
55984	58	J-453	J-454	8	Ductile Iron	130	0.0	0.00	0.0000
55985	10	J-160	J-161	99	Ductile Iron	130	0.0	0.00	0.0000
55986	196	J-146	J-557	12	Ductile Iron	130	0.0	-2.00	0.0000
55987	9	J-146	J-147	6	Ductile Iron	130	0.0	0.00	0.0000
55988	63	J-469	J-470	8	Ductile Iron	130	0.0	0.00	0.0000
55989	352	J-597	J-315	12	Ductile Iron	130	0.0	2.00	0.0000
55990	63	J-315	J-466	8	Ductile Iron	130	0.0	0.00	0.0000
55991	10	J-150	J-151	6	Ductile Iron	130	0.0	0.00	0.0000
55992	69	J-276	J-375	12	Ductile Iron	130	0.0	0.00	0.0000
55993	16	J-276	J-277	16	Ductile Iron	130	0.0	7.00	0.0100
55994	510	J-276	J-623	16	Ductile Iron	130	0.0	-6.00	0.0100
56000	304	J-239	J-272	16	Ductile Iron	130	0.0	-6.00	0.0100
56001	67	J-272	J-232	12	Ductile Iron	130	0.0	0.00	0.0000
56003	332	J-235	J-255	16	Ductile Iron	130	0.0	-7.00	0.0100
56010	9	J-51	J-52	6	Ductile Iron	130	0.0	0.00	0.0000
56014	9	J-53	J-54	6	Ductile Iron	130	0.0	0.00	0.0000
56016	30	J-212	J-213	8	Ductile Iron	130	0.0	0.00	0.0000
56018	32	J-214	J-215	8	Ductile Iron	130	0.0	0.00	0.0000
56021	6	J-13	J-14	6	Ductile Iron	130	0.0	0.00	0.0000
56023	8	J-43	J-44	6	Ductile Iron	130	0.0	0.00	0.0000
56024	23	J-171	J-172	8	Ductile Iron	130	0.0	0.00	0.0000
56025	21	J-157	J-154	8	Ductile Iron	130	0.0	0.00	0.0000
56028	8	J-47	J-48	6	Ductile Iron	130	0.0	0.00	0.0000
60881	220	J-498	J-562	8	Ductile Iron	130	0.0	-25.00	0.1600
60885	31	J-340	J-341	6	Ductile Iron	130	0.0	0.00	0.0000
64961	16	J-271	J-272	6	Ductile Iron	130	0.0	0.00	0.0000
64963	6	J-123	J-124	99	Ductile Iron	130	0.0	-187.00	0.0100
64964	32	J-347	J-348	6	Ductile Iron	130	0.0	-3.00	0.0400
75508	481	J-262	J-613	6	Ductile Iron	130	0.0	3.00	0.0300
76924	6	J-125	J-126	6	Ductile Iron	130	0.0	0.00	0.0000
76925	34	J-356	J-357	6	Ductile Iron	130	0.0	6.00	0.0700
89634	50	J-431	J-432	6	Ductile Iron	130	0.0	0.00	0.0000
89638	55	J-298	J-444	16	Ductile Iron	130	0.0	7.00	0.0100
89640	53	J-442	J-443	6	Ductile Iron	130	0.0	-13.00	0.1500
89641	13	J-242	J-243	6	Ductile Iron	130	0.0	0.00	0.0000
89642	14	J-256	J-240	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
89643	14	J-254	J-255	6	Ductile Iron	130	0.0	0.00	0.0000
89644	32	J-349	J-350	16	Ductile Iron	130	0.0	-6.00	0.0100
89646	9	J-187	J-188	16	Ductile Iron	130	0.0	9.00	0.0100
90048	53	J-438	J-439	10	Ductile Iron	130	0.0	0.00	0.0000
96761	14	J-185	J-257	10	Ductile Iron	130	0.0	0.00	0.0000
96762	9	J-185	J-186	10	Ductile Iron	130	0.0	0.00	0.0000
98803	117	J-532	J-485	12	Ductile Iron	130	0.0	0.00	0.0000
98804	1,475	J-532	J-667	12	Ductile Iron	130	0.0	0.00	0.0000
98805	315	J-667	J-366	12	Ductile Iron	130	0.0	0.00	0.0000
98806	944	J-366	J-627	12	Ductile Iron	130	0.0	0.00	0.0000
98807	584	J-627	J-628	12	Ductile Iron	130	0.0	0.00	0.0000
99201	13	J-186	J-239	12	Ductile Iron	130	0.0	0.00	0.0000
99202	504	J-620	J-236	24	Ductile Iron	130	0.0	0.00	0.0000
99203	26	J-239	J-236	12	Ductile Iron	130	0.0	0.00	0.0000
99204	21	J-156	J-620	12	Ductile Iron	130	0.0	0.00	0.0000
99205	19	J-235	J-236	1	Ductile Iron	130	0.0	0.00	0.0000
105743	8	J-132	J-133	6	Ductile Iron	130	0.0	0.00	0.0000
105756	9	J-142	J-143	6	Ductile Iron	130	0.0	0.00	0.0000
105757	21	J-64	J-307	12	Ductile Iron	130	0.0	0.00	0.0000
105758	123	J-307	J-537	12	Ductile Iron	130	0.0	0.00	0.0000
105759	17	J-280	J-63	12	Ductile Iron	130	0.0	0.00	0.0000
105760	5	J-63	J-64	12	Ductile Iron	130	0.0	0.00	0.0000
105761	19	J-290	J-291	8	Ductile Iron	130	0.0	6.00	0.0400
105762	61	J-462	J-463	8	Ductile Iron	130	0.0	0.00	0.0000
105763	198	J-463	J-535	8	Ductile Iron	130	0.0	0.00	0.0000
105765	120	J-535	J-164	8	Ductile Iron	130	0.0	0.00	0.0000
105766	8	J-164	J-165	6	Ductile Iron	130	0.0	0.00	0.0000
105767	349	J-164	J-596	8	Ductile Iron	130	0.0	0.00	0.0000
141981	27	J-330	J-290	8	Ductile Iron	130	0.0	6.00	0.0400
141982	121	J-330	J-536	8	Ductile Iron	130	0.0	-6.00	0.0400
141984	44	J-403	J-404	6	Ductile Iron	130	0.0	0.00	0.0000
141985	6	J-97	J-98	6	Ductile Iron	130	0.0	16.00	0.1800
141986	6	J-95	J-96	6	Ductile Iron	130	0.0	0.00	0.0000
141987	138	J-472	J-99	8	Ductile Iron	130	0.0	-3.00	0.0200
141988	11	J-217	J-218	6	Ductile Iron	130	0.0	-3.00	0.0400
141989	6	J-99	J-100	6	Ductile Iron	130	0.0	0.00	0.0000
141990	227	J-498	J-467	6	Ductile Iron	130	0.0	6.00	0.0700
141991	63	J-467	J-468	6	Ductile Iron	130	0.0	3.00	0.0400
141994	5	J-83	J-84	6	Ductile Iron	130	0.0	0.00	0.0000
141995	6	J-101	J-102	6	Ductile Iron	130	0.0	0.00	0.0000
144879	5	J-67	J-68	16	Ductile Iron	130	0.0	0.00	0.0000
158638	6	J-33	J-34	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
158639	43	J-244	J-245	6	Ductile Iron	130	0.0	0.00	0.0000
158640	35	J-224	J-225	8	Ductile Iron	130	0.0	0.00	0.0000
158649	26	J-193	J-194	8	Ductile Iron	130	0.0	0.00	0.0000
158650	65	J-140	J-193	8	Ductile Iron	130	0.0	0.00	0.0000
158651	18	J-139	J-140	8	Ductile Iron	130	0.0	0.00	0.0000
158652	20	J-154	J-155	8	Ductile Iron	130	0.0	0.00	0.0000
158653	25	J-191	J-192	6	Ductile Iron	130	0.0	0.00	0.0000
158654	148	J-155	J-200	8	Ductile Iron	130	0.0	0.00	0.0000
158655	26	J-200	J-201	8	Ductile Iron	130	0.0	0.00	0.0000
159024	35	J-226	J-227	8	Ductile Iron	130	0.0	0.00	0.0000
159026	11	J-85	J-86	6	Ductile Iron	130	0.0	0.00	0.0000
174392	80	J-491	J-492	8	Ductile Iron	130	0.0	0.00	0.0000
174802	41	J-395	J-396	4	Ductile Iron	130	0.0	0.00	0.0000
174803	27	J-155	J-327	4	Ductile Iron	130	0.0	0.00	0.0000
189468	7	J-148	J-149	6	Ductile Iron	130	0.0	0.00	0.0000
189469	131	J-279	J-130	8	Ductile Iron	130	0.0	0.00	0.0000
189470	6	J-130	J-131	8	Ductile Iron	130	0.0	0.00	0.0000
189472	197	J-559	J-437	8	Ductile Iron	130	0.0	-3.00	0.0200
189473	16	J-273	J-274	6	Ductile Iron	130	0.0	0.00	0.0000
189474	53	J-437	J-361	8	Ductile Iron	130	0.0	-3.00	0.0200
189475	36	J-361	J-362	8	Ductile Iron	130	0.0	-3.00	0.0200
189476	197	J-362	J-558	8	Ductile Iron	130	0.0	-9.00	0.0600
189477	6	J-91	J-92	4	Ductile Iron	130	0.0	0.00	0.0000
198398	147	J-417	J-286	8	Ductile Iron	130	0.0	1.00	0.0100
203870	6	J-2	J-19	16	Ductile Iron	130	0.0	-7.00	0.0100
203871	1	J-1	J-2	8	Ductile Iron	130	0.0	0.00	0.0000
213052	70	J-475	J-219	8	Ductile Iron	130	0.0	7.00	0.0500
213053	11	J-219	J-220	6	Ductile Iron	130	0.0	0.00	0.0000
213054	388	J-219	J-418	8	Ductile Iron	130	0.0	5.00	0.0300
213055	47	J-418	J-419	6	Ductile Iron	130	0.0	0.00	0.0000
225318	10	J-196	J-205	6	Ductile Iron	130	0.0	-11.00	0.1200
228582	4	J-34	J-35	6	Ductile Iron	130	0.0	9.00	0.1000
228583	329	J-594	J-34	6	Ductile Iron	130	0.0	9.00	0.1000
229343	12	J-12	J-234	8	Ductile Iron	130	0.0	24.00	0.1500
229344	4	J-28	J-29	6	Ductile Iron	130	0.0	42.00	0.4700
229345	6	J-29	J-10	6	Ductile Iron	130	0.0	42.00	0.4700
229346	2	J-10	J-11	8	Ductile Iron	130	0.0	24.00	0.1500
229347	2	J-11	J-12	8	Ductile Iron	130	0.0	24.00	0.1500
239091	40	J-232	J-233	12	Ductile Iron	130	0.0	0.00	0.0000
239094	15	J-243	J-263	6	Ductile Iron	130	0.0	0.00	0.0000
239098	13	J-240	J-241	6	Ductile Iron	130	0.0	0.00	0.0000
239099	20	J-255	J-299	6	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
239483	168	J-552	J-117	8	Ductile Iron	130	0.0	2.00	0.0100
239484	116	J-471	J-511	8	Ductile Iron	130	0.0	-3.00	0.0200
239485	44	J-405	J-406	8	Ductile Iron	130	0.0	2.00	0.0100
239486	312	J-587	J-591	6	Ductile Iron	130	0.0	16.00	0.1800
239487	158	J-536	J-404	8	Ductile Iron	130	0.0	-6.00	0.0400
239883	11	J-221	J-222	6	Ductile Iron	130	0.0	22.00	0.2500
239884	557	J-573	J-617	8	Ductile Iron	130	0.0	-3.00	0.0200
239886	455	J-610	J-394	8	Ductile Iron	130	0.0	-6.00	0.0400
239888	37	J-363	J-364	12	Ductile Iron	130	0.0	-8.00	0.0200
240694	84	J-406	J-407	8	Ductile Iron	130	0.0	2.00	0.0100
240695	46	J-117	J-417	8	Ductile Iron	130	0.0	1.00	0.0100
240696	69	J-286	J-471	8	Ductile Iron	130	0.0	-3.00	0.0200
240697	441	J-483	J-107	6	Ductile Iron	130	0.0	-2.00	0.0300
240699	507	J-621	J-622	6	Ductile Iron	130	0.0	-32.00	0.3600
240700	70	J-472	J-473	8	Ductile Iron	130	0.0	-19.00	0.1200
240701	101	J-99	J-217	8	Ductile Iron	130	0.0	-3.00	0.0200
240702	199	J-526	J-475	16	Ductile Iron	130	0.0	65.00	0.1000
240703	164	J-475	J-537	16	Ductile Iron	130	0.0	58.00	0.0900
241094	155	J-547	J-477	8	Ductile Iron	130	0.0	42.00	0.2700
241095	254	J-572	J-79	6	Ductile Iron	130	0.0	52.00	0.5800
241097	229	J-565	J-106	6	Ductile Iron	130	0.0	16.00	0.1800
241098	453	J-167	J-609	6	Ductile Iron	130	0.0	3.00	0.0400
241100	206	J-359	J-560	6	Ductile Iron	130	0.0	3.00	0.0300
241101	204	J-560	J-204	6	Ductile Iron	130	0.0	1.00	0.0100
241104	61	J-461	J-371	8	Ductile Iron	130	0.0	0.00	0.0000
241105	54	J-371	J-436	8	Ductile Iron	130	0.0	0.00	0.0000
241106	102	J-181	J-461	8	Ductile Iron	130	0.0	71.00	0.4500
241109	49	J-227	J-144	8	Ductile Iron	130	0.0	71.00	0.4500
241111	44	J-246	J-247	8	Ductile Iron	130	0.0	71.00	0.4500
241115	849	J-52	J-88	6	Ductile Iron	130	0.0	7.00	0.0800
241117	572	J-632	J-633	6	Ductile Iron	130	0.0	13.00	0.1400
241118	579	J-632	J-213	6	Ductile Iron	130	0.0	-23.00	0.2600
241121	22	J-314	J-315	8	Ductile Iron	130	0.0	0.00	0.0000
241122	226	J-557	J-469	12	Ductile Iron	130	0.0	-2.00	0.0000
241123	116	J-453	J-146	12	Ductile Iron	130	0.0	-2.00	0.0000
241127	443	J-444	J-608	16	Ductile Iron	130	0.0	7.00	0.0100
241128	303	J-78	J-442	6	Ductile Iron	130	0.0	-13.00	0.1500
241131	268	J-193	J-580	16	Ductile Iron	130	0.0	-6.00	0.0100
241136	592	J-585	J-27	6	Ductile Iron	130	0.0	0.00	0.0000
241137	269	J-446	J-385	16	Ductile Iron	130	0.0	-9.00	0.0100
241139	125	J-533	J-534	6	Ductile Iron	130	0.0	3.00	0.0400
241142	45	J-400	J-416	16	Ductile Iron	130	0.0	-59.00	0.0900



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
241145	265	J-519	J-333	16	Ductile Iron	130	0.0	-132.00	0.2100
241146	323	J-370	J-397	16	Ductile Iron	130	0.0	-145.00	0.2300
241147	42	J-397	J-285	16	Ductile Iron	130	0.0	-145.00	0.2300
241148	465	J-285	J-439	16	Ductile Iron	130	0.0	-194.00	0.3100
241494	292	J-432	J-546	16	Ductile Iron	130	0.0	-194.00	0.3100
241495	150	J-546	J-323	16	Ductile Iron	130	0.0	-194.00	0.3100
241496	69	J-323	J-1	16	Ductile Iron	130	0.0	-194.00	0.3100
241497	32	J-1	J-346	16	Ductile Iron	130	0.0	-194.00	0.3100
241498	99	J-346	J-414	16	Ductile Iron	130	0.0	-338.00	0.5400
241499	45	J-414	J-415	16	Ductile Iron	130	0.0	-338.00	0.5400
241500	94	J-501	J-502	6	Ductile Iron	130	0.0	-7.00	0.0800
241502	487	J-501	J-614	6	Ductile Iron	130	0.0	13.00	0.1500
242703	326	J-592	J-593	6	Ductile Iron	130	0.0	-7.00	0.0800
243096	18	J-281	J-16	16	Ductile Iron	130	0.0	2.00	0.0000
243097	33	J-355	J-281	16	Ductile Iron	130	0.0	7.00	0.0100
243100	127	J-504	J-233	16	Ductile Iron	130	0.0	75.00	0.1200
243101	392	J-506	J-562	16	Ductile Iron	130	0.0	122.00	0.1900
243898	52	J-434	J-38	8	Ductile Iron	130	0.0	0.00	0.0000
243899	4	J-38	J-39	6	Ductile Iron	130	0.0	0.00	0.0000
243900	60	J-457	J-42	8	Ductile Iron	130	0.0	0.00	0.0000
243901	4	J-42	J-43	6	Ductile Iron	130	0.0	0.00	0.0000
247576	10	J-13	J-214	6	Ductile Iron	130	0.0	-13.00	0.1500
247577	2	J-13	J-14	6	Ductile Iron	130	0.0	0.00	0.0000
247937	3	J-14	J-19	6	Ductile Iron	130	0.0	0.00	0.0000
P-1	205	J-643	J-380	6	Ductile Iron	130	0.0	69.00	0.7800
P-2	520	J-380	J-381	6	Ductile Iron	130	0.0	29.00	0.3300
P-3	283	J-381	J-382	6	Ductile Iron	130	0.0	22.00	0.2500
P-4	531	J-382	J-383	6	Ductile Iron	130	0.0	19.00	0.2200
P-5	423	J-383	J-384	6	Ductile Iron	130	0.0	-20.00	0.2300
P-6	283	J-384	J-385	6	Ductile Iron	130	0.0	-25.00	0.2900
P-7	434	J-385	J-380	6	Ductile Iron	130	0.0	-31.00	0.3500
P-8	679	J-647	J-386	6	Ductile Iron	130	0.0	-16.00	0.1900
P-9	302	J-386	J-656	6	Ductile Iron	130	0.0	10.00	0.1200
P-10	155	J-383	J-386	6	Ductile Iron	130	0.0	31.00	0.3500
P-11	501	J-593	J-387	6	Ductile Iron	130	0.0	-7.00	0.0800
P-12	462	J-387	J-441	6	Ductile Iron	130	0.0	-12.00	0.1400
P-13	472	J-658	J-388	6	Ductile Iron	130	0.0	-10.00	0.1200
P-14	515	J-388	J-588	6	Ductile Iron	130	0.0	-21.00	0.2400
P-15	655	J-363	J-389	6	Ductile Iron	130	0.0	43.00	0.4900
P-16	635	J-389	J-588	6	Ductile Iron	130	0.0	38.00	0.4300
P-17	414	J-588	J-391	6	Ductile Iron	130	0.0	0.00	0.0000
P-19	630	J-664	J-392	6	Ductile Iron	130	0.0	44.00	0.5000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-20	660	J-392	J-665	6	Ductile Iron	130	0.0	35.00	0.4000
P-22	632	J-394	J-384	6	Ductile Iron	130	0.0	-43.00	0.4800
P-25	931	J-222	J-397	6	Ductile Iron	130	0.0	-2.00	0.0200
P-26	265	J-397	J-621	6	Ductile Iron	130	0.0	-17.00	0.1900
P-28	540	J-398	J-232	6	Ductile Iron	130	0.0	-56.00	0.6400
P-31	31	R-2	PMP-2	99	Ductile Iron	130	0.0	460.00	0.0200
P-32	42	PMP-2	J-116	99	Ductile Iron	130	0.0	460.00	0.0200
P-34	72	R-3	PMP-3	99	Ductile Iron	130	0.0	0.00	0.0000
P-35	80	PMP-3	J-161	99	Ductile Iron	130	0.0	0.00	0.0000
P-36	26	R-1	PMP-1	99	Ductile Iron	130	0.0	187.00	0.0100
P-37	25	PMP-1	J-124	99	Ductile Iron	130	0.0	187.00	0.0100
P-38	45	J-350	J-401	16	Ductile Iron	130	0.0	-6.00	0.0100
P-39	18	J-401	J-188	16	Ductile Iron	130	0.0	-9.00	0.0100
P-41	336	J-401	J-673	6	Ductile Iron	130	0.0	3.00	0.0400
P-44	1	J-321	J-365	12	Ductile Iron	130	0.0	-58.00	0.1700
P-47	379	J-237	J-235	16	Ductile Iron	130	0.0	-7.00	0.0100
P-49	182	J-250	J-237	16	Ductile Iron	130	0.0	-7.00	0.0100
P-50	242	J-272	J-229	16	Ductile Iron	130	0.0	-7.00	0.0100
P-51	133	J-229	J-250	16	Ductile Iron	130	0.0	-7.00	0.0100
P-53	186	J-242	J-239	16	Ductile Iron	130	0.0	-6.00	0.0100
P-54	200	J-623	J-129	16	Ductile Iron	130	0.0	-6.00	0.0100
P-55	115	J-129	J-242	16	Ductile Iron	130	0.0	-6.00	0.0100
P-56	138	J-15	J-332	16	Ductile Iron	130	0.0	7.00	0.0100
P-58	5	J-332	J-284	16	Ductile Iron	130	0.0	7.00	0.0100
P-59	290	J-284	J-17	16	Ductile Iron	130	0.0	7.00	0.0100
P-62	5	J-287	J-336	16	Ductile Iron	130	0.0	-7.00	0.0100
P-63	658	J-336	J-2	16	Ductile Iron	130	0.0	-7.00	0.0100
P-65	11	J-365	J-370	16	Ductile Iron	130	0.0	-145.00	0.2300
P-74	54	J-326	J-430	6	Ductile Iron	130	0.0	2.00	0.0200
P-75	644	J-430	J-367	6	Ductile Iron	130	0.0	6.00	0.0700
P-78	4	J-15	J-94	16	Ductile Iron	130	0.0	0.00	0.0000
P-85	17	J-378	J-325	12	Ductile Iron	130	0.0	-79.00	0.2200
P-87	1	J-321	J-365	8	Ductile Iron	130	0.0	-20.00	0.1300
P-90	70	J-296	J-322	12	Ductile Iron	130	0.0	-8.00	0.0200
P-92	187	J-164	J-293	12	Ductile Iron	130	0.0	-79.00	0.2200
P-93	49	J-293	J-378	12	Ductile Iron	130	0.0	-79.00	0.2200
P-96	512	J-626	J-321	30	Ductile Iron	130	0.0	71.00	0.0300
P-97	39	J-321	J-67	30	Ductile Iron	130	0.0	26.00	0.0100
P-98	18	J-484	J-292	16	Ductile Iron	130	0.0	-26.00	0.0400
P-99	62	J-292	J-382	16	Ductile Iron	130	0.0	-26.00	0.0400
P-102	583	J-391	J-665	6	Ductile Iron	130	0.0	-11.00	0.1200
P-103	326	J-665	J-657	6	Ductile Iron	130	0.0	15.00	0.1700

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-106	503	J-447	J-630	6	Ductile Iron	130	0.0	10.00	0.1200
P-107	30	J-630	J-625	6	Ductile Iron	130	0.0	0.00	0.0000
P-108	12	J-185	J-628	8	Ductile Iron	130	0.0	0.00	0.0000
P-109	3	J-628	J-266	8	Ductile Iron	130	0.0	0.00	0.0000
P-110	11	J-605	J-138	8	Ductile Iron	130	0.0	-9.00	0.0600
P-111	409	J-138	J-606	8	Ductile Iron	130	0.0	-9.00	0.0600
P-112	641	J-65	J-590	6	Ductile Iron	130	0.0	22.00	0.2500
P-113	297	J-590	J-52	6	Ductile Iron	130	0.0	16.00	0.1800
P-115	24	J-372	J-312	8	Ductile Iron	130	0.0	0.00	0.0000
P-117	6	J-343	J-340	8	Ductile Iron	130	0.0	0.00	0.0000
P-121	46	J-291	J-583	16	Ductile Iron	130	0.0	65.00	0.1000
P-123	26	J-568	J-581	16	Ductile Iron	130	0.0	98.00	0.1600
P-124	206	J-638	J-578	16	Ductile Iron	130	0.0	-24.00	0.0400
P-125	433	J-578	J-20	16	Ductile Iron	130	0.0	-26.00	0.0400
P-126	56	J-476	J-572	6	Ductile Iron	130	0.0	9.00	0.1000
P-127	14	J-572	J-477	6	Ductile Iron	130	0.0	-42.00	0.4800
P-128	5	J-322	J-355	12	Ductile Iron	130	0.0	-8.00	0.0200
P-130	237	J-416	J-391	16	Ductile Iron	130	0.0	-59.00	0.0900
P-131	10	J-391	J-571	16	Ductile Iron	130	0.0	-59.00	0.0900
P-133	45	J-324	J-65	12	Ductile Iron	130	0.0	-79.00	0.2200
P-134	561	J-562	J-6	16	Ductile Iron	130	0.0	98.00	0.1600
P-135	4	J-6	J-568	16	Ductile Iron	130	0.0	98.00	0.1600
P-146	662	J-616	J-37	6	Ductile Iron	130	0.0	-14.00	0.1600
P-147	104	J-37	J-651	6	Ductile Iron	130	0.0	-20.00	0.2200
P-148	17	J-393	J-339	8	Ductile Iron	130	0.0	6.00	0.0400
P-149	24	J-339	J-394	8	Ductile Iron	130	0.0	6.00	0.0400
P-150	73	J-633	J-190	6	Ductile Iron	130	0.0	8.00	0.0900
P-151	617	J-190	J-648	6	Ductile Iron	130	0.0	4.00	0.0500
P-152	52	J-32	J-195	6	Ductile Iron	130	0.0	-11.00	0.1200
P-154	92	J-205	J-409	8	Ductile Iron	130	0.0	0.00	0.0000
P-155	23	J-409	J-528	8	Ductile Iron	130	0.0	0.00	0.0000
P-156	720	J-649	J-143	12	Ductile Iron	130	0.0	0.00	0.0000
P-157	2	J-143	J-280	12	Ductile Iron	130	0.0	0.00	0.0000
P-158	545	J-629	J-306	6	Ductile Iron	130	0.0	-5.00	0.0600
P-159	18	J-306	J-630	6	Ductile Iron	130	0.0	-5.00	0.0600
P-163	287	J-395	J-661	30	Ductile Iron	130	0.0	71.00	0.0300
P-164	82	J-619	J-254	16	Ductile Iron	130	0.0	-6.00	0.0100
P-165	465	J-254	J-349	16	Ductile Iron	130	0.0	-6.00	0.0100
P-166	207	J-617	J-216	8	Ductile Iron	130	0.0	-6.00	0.0400
P-167	293	J-216	J-618	8	Ductile Iron	130	0.0	-6.00	0.0400
P-170	6	J-291	J-21	12	Ductile Iron	130	0.0	-79.00	0.2200
P-171	61	J-21	J-324	12	Ductile Iron	130	0.0	-79.00	0.2200



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-172	281	J-524	J-252	16	Ductile Iron	130	0.0	-84.00	0.1300
P-173	90	J-252	J-599	16	Ductile Iron	130	0.0	-84.00	0.1300
P-175	137	J-173	J-598	16	Ductile Iron	130	0.0	-84.00	0.1300
P-176	44	J-597	J-49	12	Ductile Iron	130	0.0	-1.00	0.0000
P-180	264	J-132	J-195	12	Ductile Iron	130	0.0	1.00	0.0000
P-181	72	J-195	J-597	12	Ductile Iron	130	0.0	1.00	0.0000
P-184	177	J-10	J-75	6	Ductile Iron	130	0.0	18.00	0.2000
P-185	159	J-75	J-594	6	Ductile Iron	130	0.0	9.00	0.1000
P-186	47	J-334	J-377	6	Ductile Iron	130	0.0	12.00	0.1300
P-187	8	J-377	J-447	6	Ductile Iron	130	0.0	12.00	0.1300
P-188	16	J-422	J-85	6	Ductile Iron	130	0.0	38.00	0.4300
P-189	733	J-85	J-65	6	Ductile Iron	130	0.0	31.00	0.3600
P-192	208	J-277	J-212	12	Ductile Iron	130	0.0	1.00	0.0000
P-194	136	J-172	J-177	8	Ductile Iron	130	0.0	0.00	0.0000
P-195	25	J-177	J-343	8	Ductile Iron	130	0.0	0.00	0.0000
P-198	42	J-582	J-356	8	Ductile Iron	130	0.0	71.00	0.4500
P-199	270	J-356	J-389	8	Ductile Iron	130	0.0	65.00	0.4100
P-200	111	J-579	J-491	12	Ductile Iron	130	0.0	-79.00	0.2200
P-201	157	J-491	J-487	12	Ductile Iron	130	0.0	-79.00	0.2200
P-202	434	J-129	J-198	6	Ductile Iron	130	0.0	-9.00	0.1000
P-203	19	J-198	J-561	6	Ductile Iron	130	0.0	-9.00	0.1000
P-204	99	J-606	J-141	8	Ductile Iron	130	0.0	-11.00	0.0700
P-205	334	J-141	J-547	8	Ductile Iron	130	0.0	-14.00	0.0900
P-206	433	J-608	J-443	16	Ductile Iron	130	0.0	7.00	0.0100
P-207	44	J-443	J-563	16	Ductile Iron	130	0.0	-6.00	0.0100
P-210	56	J-498	J-340	8	Ductile Iron	130	0.0	19.00	0.1200
P-211	30	J-340	J-473	8	Ductile Iron	130	0.0	19.00	0.1200
P-212	7	J-468	J-101	6	Ductile Iron	130	0.0	3.00	0.0400
P-213	84	J-101	J-345	6	Ductile Iron	130	0.0	3.00	0.0400
P-214	16	J-218	J-83	6	Ductile Iron	130	0.0	-3.00	0.0400
P-215	16	J-83	J-345	6	Ductile Iron	130	0.0	-3.00	0.0400
P-216	25	J-404	J-97	8	Ductile Iron	130	0.0	-6.00	0.0400
P-218	32	J-97	J-95	8	Ductile Iron	130	0.0	-22.00	0.1400
P-219	117	J-95	J-472	8	Ductile Iron	130	0.0	-22.00	0.1400
P-220	18	J-415	J-115	16	Ductile Iron	130	0.0	-338.00	0.5400
P-221	79	J-115	J-506	16	Ductile Iron	130	0.0	122.00	0.1900
P-222	125	J-450	J-160	12	Ductile Iron	130	0.0	-2.00	0.0000
P-223	13	J-160	J-543	12	Ductile Iron	130	0.0	-2.00	0.0000
P-224	10	J-383	J-123	8	Ductile Iron	130	0.0	-145.00	0.9200
P-225	30	J-123	J-384	8	Ductile Iron	130	0.0	43.00	0.2700
P-226	34	J-212	J-331	12	Ductile Iron	130	0.0	1.00	0.0000
P-228	176	J-331	J-214	12	Ductile Iron	130	0.0	1.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-230	85	J-214	J-13	12	Ductile Iron	130	0.0	1.00	0.0000
P-231	168	J-13	J-375	12	Ductile Iron	130	0.0	1.00	0.0000
P-235	55	J-301	J-321	12	Ductile Iron	130	0.0	-8.00	0.0200
P-236	562	J-49	J-55	12	Ductile Iron	130	0.0	-1.00	0.0000
P-237	37	J-55	J-277	12	Ductile Iron	130	0.0	-1.00	0.0000
P-240	321	J-282	J-53	12	Ductile Iron	130	0.0	2.00	0.0000
P-241	454	J-53	J-276	12	Ductile Iron	130	0.0	2.00	0.0000
P-243	35	J-81	J-165	12	Ductile Iron	130	0.0	-8.00	0.0200
P-245	153	J-69	J-349	12	Ductile Iron	130	0.0	-7.00	0.0200
P-246	80	J-349	J-370	12	Ductile Iron	130	0.0	-7.00	0.0200
P-247	91	J-370	J-81	12	Ductile Iron	130	0.0	-7.00	0.0200
P-252	80	J-326	J-61	8	Ductile Iron	130	0.0	71.00	0.4500
P-253	27	J-61	J-512	8	Ductile Iron	130	0.0	71.00	0.4500
P-254	46	J-231	J-327	16	Ductile Iron	130	0.0	-7.00	0.0100
P-255	18	J-327	J-189	16	Ductile Iron	130	0.0	-7.00	0.0100
P-256	3	J-518	J-513	16	Ductile Iron	130	0.0	59.00	0.0900
P-257	228	J-513	J-291	16	Ductile Iron	130	0.0	59.00	0.0900
P-259	121	J-197	J-282	12	Ductile Iron	130	0.0	2.00	0.0000
P-261	19	J-375	J-226	8	Ductile Iron	130	0.0	0.00	0.0000
P-262	34	J-227	J-86	8	Ductile Iron	130	0.0	0.00	0.0000
P-266	22	J-478	J-295	12	Ductile Iron	130	0.0	45.00	0.1300
P-267	6	J-295	J-297	12	Ductile Iron	130	0.0	44.00	0.1200
P-268	60	J-201	J-191	8	Ductile Iron	130	0.0	0.00	0.0000
P-269	237	J-191	J-139	8	Ductile Iron	130	0.0	0.00	0.0000
P-277	58	J-244	J-224	8	Ductile Iron	130	0.0	0.00	0.0000
P-278	29	J-225	J-367	8	Ductile Iron	130	0.0	0.00	0.0000
P-279	23	J-367	J-262	8	Ductile Iron	130	0.0	0.00	0.0000
P-280	340	J-86	J-33	8	Ductile Iron	130	0.0	0.00	0.0000
P-281	110	J-33	J-244	8	Ductile Iron	130	0.0	0.00	0.0000
P-283	156	J-209	J-132	12	Ductile Iron	130	0.0	1.00	0.0000
P-284	140	J-367	J-202	12	Ductile Iron	130	0.0	1.00	0.0000
P-285	45	J-202	J-209	12	Ductile Iron	130	0.0	1.00	0.0000
P-286	201	J-297	J-459	12	Ductile Iron	130	0.0	41.00	0.1100
P-288	16	J-459	J-413	12	Ductile Iron	130	0.0	41.00	0.1100
P-289	4	J-413	J-411	12	Ductile Iron	130	0.0	37.00	0.1100
P-290	95	J-233	J-457	16	Ductile Iron	130	0.0	19.00	0.0300
P-291	195	J-457	J-261	16	Ductile Iron	130	0.0	19.00	0.0300
P-292	38	J-421	J-456	16	Ductile Iron	130	0.0	-132.00	0.2100
P-293	69	J-456	J-519	16	Ductile Iron	130	0.0	-132.00	0.2100
P-294	36	J-333	J-373	16	Ductile Iron	130	0.0	-143.00	0.2300
P-295	875	J-373	J-365	16	Ductile Iron	130	0.0	-143.00	0.2300
P-300	190	J-261	J-434	16	Ductile Iron	130	0.0	11.00	0.0200

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-301	77	J-434	J-496	16	Ductile Iron	130	0.0	11.00	0.0200
P-302	20	J-187	J-428	16	Ductile Iron	130	0.0	-9.00	0.0100
P-303	40	J-428	J-446	16	Ductile Iron	130	0.0	-9.00	0.0100
P-304	310	J-571	J-423	16	Ductile Iron	130	0.0	-59.00	0.0900
P-309	214	J-270	J-373	12	Ductile Iron	130	0.0	0.00	0.0000
P-310	32	J-423	J-387	16	Ductile Iron	130	0.0	-59.00	0.0900
P-311	23	J-387	J-426	16	Ductile Iron	130	0.0	-59.00	0.0900
P-312	184	J-151	J-125	8	Ductile Iron	130	0.0	0.00	0.0000
P-314	65	J-157	J-171	12	Ductile Iron	130	0.0	0.00	0.0000
P-315	137	J-171	J-372	12	Ductile Iron	130	0.0	0.00	0.0000
P-316	16	J-153	J-143	12	Ductile Iron	130	0.0	0.00	0.0000
P-317	32	J-143	J-156	12	Ductile Iron	130	0.0	0.00	0.0000
P-318	100	J-353	J-101	12	Ductile Iron	130	0.0	-8.00	0.0200
P-319	149	J-101	J-301	12	Ductile Iron	130	0.0	-8.00	0.0200
P-330	274	J-272	J-181	12	Ductile Iron	130	0.0	2.00	0.0000
P-332	80	J-181	J-51	12	Ductile Iron	130	0.0	2.00	0.0000
P-333	67	J-51	J-197	12	Ductile Iron	130	0.0	2.00	0.0000
P-334	33	J-464	J-154	30	Ductile Iron	130	0.0	71.00	0.0300
P-336	10	J-154	J-152	30	Ductile Iron	130	0.0	71.00	0.0300
P-337	708	J-152	J-395	30	Ductile Iron	130	0.0	71.00	0.0300
P-338	154	J-363	J-73	12	Ductile Iron	130	0.0	-8.00	0.0200
P-339	246	J-73	J-168	12	Ductile Iron	130	0.0	-8.00	0.0200
P-340	89	J-156	J-137	12	Ductile Iron	130	0.0	0.00	0.0000
P-341	185	J-137	J-367	12	Ductile Iron	130	0.0	0.00	0.0000
P-342	51	J-365	J-71	12	Ductile Iron	130	0.0	-79.00	0.2200
P-343	145	J-71	J-297	12	Ductile Iron	130	0.0	-79.00	0.2200
P-348	5	J-223	J-106	12	Ductile Iron	130	0.0	-7.00	0.0200
P-350	10	J-106	J-67	12	Ductile Iron	130	0.0	-7.00	0.0200
P-351	263	J-67	J-69	12	Ductile Iron	130	0.0	-7.00	0.0200
P-352	15	J-277	J-282	16	Ductile Iron	130	0.0	7.00	0.0100
P-353	5	J-282	J-298	16	Ductile Iron	130	0.0	7.00	0.0100
P-354	72	J-276	J-134	12	Ductile Iron	130	0.0	-2.00	0.0000
P-355	21	J-134	J-448	12	Ductile Iron	130	0.0	-2.00	0.0000
P-357	88	J-273	J-559	8	Ductile Iron	130	0.0	-3.00	0.0200
P-358	583	J-364	J-271	12	Ductile Iron	130	0.0	-8.00	0.0200
P-360	7	J-558	J-264	8	Ductile Iron	130	0.0	-9.00	0.0600
P-362	73	J-563	J-242	16	Ductile Iron	130	0.0	-6.00	0.0100
P-363	149	J-242	J-193	16	Ductile Iron	130	0.0	-6.00	0.0100
P-364	173	J-607	J-259	16	Ductile Iron	130	0.0	-84.00	0.1300
P-365	180	J-259	J-173	16	Ductile Iron	130	0.0	-84.00	0.1300
P-366	82	J-580	J-256	16	Ductile Iron	130	0.0	-6.00	0.0100
P-367	418	J-256	J-619	16	Ductile Iron	130	0.0	-6.00	0.0100

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-368	4	J-24	J-7	16	Ductile Iron	130	0.0	-7.00	0.0100
P-369	20	J-7	J-120	16	Ductile Iron	130	0.0	-7.00	0.0100
P-370	49	J-355	J-77	12	Ductile Iron	130	0.0	-8.00	0.0200
P-371	186	J-77	J-353	12	Ductile Iron	130	0.0	-8.00	0.0200
P-372	155	J-375	J-43	12	Ductile Iron	130	0.0	0.00	0.0000
P-373	119	J-43	J-157	12	Ductile Iron	130	0.0	0.00	0.0000
P-374	56	J-325	J-63	12	Ductile Iron	130	0.0	-79.00	0.2200
P-375	392	J-63	J-291	12	Ductile Iron	130	0.0	-79.00	0.2200
P-376	22	J-402	J-200	8	Ductile Iron	130	0.0	5.00	0.0300
P-377	1,316	J-200	J-516	8	Ductile Iron	130	0.0	5.00	0.0300
P-378	69	J-372	J-47	12	Ductile Iron	130	0.0	0.00	0.0000
P-379	87	J-47	J-270	12	Ductile Iron	130	0.0	0.00	0.0000
P-380	207	J-487	J-183	12	Ductile Iron	130	0.0	-79.00	0.2200
P-381	301	J-183	J-489	12	Ductile Iron	130	0.0	-84.00	0.2400
P-382	731	J-213	J-180	6	Ductile Iron	130	0.0	-31.00	0.3500
P-383	19	J-180	J-427	6	Ductile Iron	130	0.0	-38.00	0.4300
P-384	19	J-315	J-150	12	Ductile Iron	130	0.0	2.00	0.0000
P-385	164	J-150	J-469	12	Ductile Iron	130	0.0	2.00	0.0000
P-386	200	J-121	J-5	16	Ductile Iron	130	0.0	-7.00	0.0100
P-387	399	J-5	J-287	16	Ductile Iron	130	0.0	-7.00	0.0100
P-388	6	J-278	J-148	8	Ductile Iron	130	0.0	0.00	0.0000
P-389	11	J-148	J-279	8	Ductile Iron	130	0.0	0.00	0.0000
P-390	52	J-131	J-91	8	Ductile Iron	130	0.0	0.00	0.0000
P-391	77	J-91	J-273	8	Ductile Iron	130	0.0	0.00	0.0000
P-392	213	J-662	J-133	12	Ductile Iron	130	0.0	0.00	0.0000
P-393	833	J-133	J-649	12	Ductile Iron	130	0.0	0.00	0.0000
P-394	146	J-461	J-125	8	Ductile Iron	130	0.0	71.00	0.4500
P-395	128	J-125	J-582	8	Ductile Iron	130	0.0	71.00	0.4500
P-396	341	J-125	J-9	8	Ductile Iron	130	0.0	0.00	0.0000
P-397	20	J-9	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
P-398	23	J-425	J-82	6	Ductile Iron	130	0.0	-16.00	0.1800
P-399	26	J-82	J-386	6	Ductile Iron	130	0.0	-16.00	0.1800
P-400	257	J-489	J-73	12	Ductile Iron	130	0.0	-84.00	0.2400
P-401	74	J-73	J-531	12	Ductile Iron	130	0.0	-84.00	0.2400
P-402	8	J-615	J-57	6	Ductile Iron	130	0.0	0.00	0.0000
P-403	489	J-57	J-616	6	Ductile Iron	130	0.0	0.00	0.0000
P-404	581	J-651	J-31	6	Ductile Iron	130	0.0	-25.00	0.2800
P-405	643	J-31	J-520	6	Ductile Iron	130	0.0	-34.00	0.3900
P-406	88	J-520	J-25	6	Ductile Iron	130	0.0	-41.00	0.4700
P-407	24	J-25	J-401	6	Ductile Iron	130	0.0	-41.00	0.4700
P-410	91	J-247	J-91	8	Ductile Iron	130	0.0	71.00	0.4500
P-411	62	J-91	J-326	8	Ductile Iron	130	0.0	71.00	0.4500

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-412	2	J-600	J-284	6	Ductile Iron	130	0.0	-7.00	0.0800
P-414	2	J-284	J-600	6	Ductile Iron	130	0.0	7.00	0.0800
P-415	372	J-600	J-441	6	Ductile Iron	130	0.0	12.00	0.1400
P-416	822	J-614	J-284	6	Ductile Iron	130	0.0	12.00	0.1300
P-417	2	J-284	J-652	6	Ductile Iron	130	0.0	0.00	0.0000
P-418	47	J-263	J-24	16	Ductile Iron	130	0.0	0.00	0.0000
P-419	5	J-24	J-254	16	Ductile Iron	130	0.0	7.00	0.0100
P-435	17	J-400	J-534	6	Ductile Iron	130	0.0	34.00	0.3800
P-437	1	J-534	J-639	6	Ductile Iron	130	0.0	37.00	0.4200
P-438	27	J-639	J-401	6	Ductile Iron	130	0.0	41.00	0.4700
P-441	17	J-426	J-640	6	Ductile Iron	130	0.0	35.00	0.3900
P-443	1	J-640	J-641	6	Ductile Iron	130	0.0	30.00	0.3500
P-444	32	J-641	J-427	6	Ductile Iron	130	0.0	38.00	0.4300
P-445	14	J-421	J-642	6	Ductile Iron	130	0.0	38.00	0.4300
P-447	1	J-642	J-592	6	Ductile Iron	130	0.0	31.00	0.3500
P-448	34	J-592	J-422	6	Ductile Iron	130	0.0	38.00	0.4300
P-449	17	J-385	J-673	6	Ductile Iron	130	0.0	16.00	0.1800
P-451	1	J-673	J-624	6	Ductile Iron	130	0.0	19.00	0.2200
P-452	24	J-624	J-386	6	Ductile Iron	130	0.0	16.00	0.1800
P-453	24	J-321	J-69	12	Ductile Iron	130	0.0	45.00	0.1300
P-454	5	J-69	J-322	12	Ductile Iron	130	0.0	45.00	0.1300
P-457	90	J-581	J-4	16	Ductile Iron	130	0.0	91.00	0.1500
P-459	269	J-465	J-383	12	Ductile Iron	130	0.0	-77.00	0.2200
P-460	341	J-383	J-348	12	Ductile Iron	130	0.0	68.00	0.1900
P-462	69	J-271	J-404	12	Ductile Iron	130	0.0	-15.00	0.0400
P-463	312	J-404	J-664	12	Ductile Iron	130	0.0	-15.00	0.0400
P-464	82	J-4	J-405	16	Ductile Iron	130	0.0	80.00	0.1300
P-465	98	J-405	J-435	16	Ductile Iron	130	0.0	80.00	0.1300
P-475	22	J-20	J-408	16	Ductile Iron	130	0.0	-26.00	0.0400
P-476	601	J-408	J-635	16	Ductile Iron	130	0.0	-26.00	0.0400
P-483	52	J-136	J-412	6	Ductile Iron	130	0.0	42.00	0.4800
P-484	372	J-412	J-565	6	Ductile Iron	130	0.0	42.00	0.4800
P-487	20	J-264	J-414	8	Ductile Iron	130	0.0	-14.00	0.0900
P-488	218	J-414	J-234	8	Ductile Iron	130	0.0	-14.00	0.0900
P-496	136	J-664	J-421	12	Ductile Iron	130	0.0	-64.00	0.1800
P-497	191	J-421	J-348	12	Ductile Iron	130	0.0	-64.00	0.1800
P-517	930	J-403	J-394	6	Ductile Iron	130	0.0	-34.00	0.3800
P-518	449	J-622	J-410	6	Ductile Iron	130	0.0	-47.00	0.5300
P-519	224	J-410	J-398	6	Ductile Iron	130	0.0	-47.00	0.5300
P-522	10	J-657	J-432	6	Ductile Iron	130	0.0	-34.00	0.3800
P-523	11	J-432	J-403	6	Ductile Iron	130	0.0	-34.00	0.3800

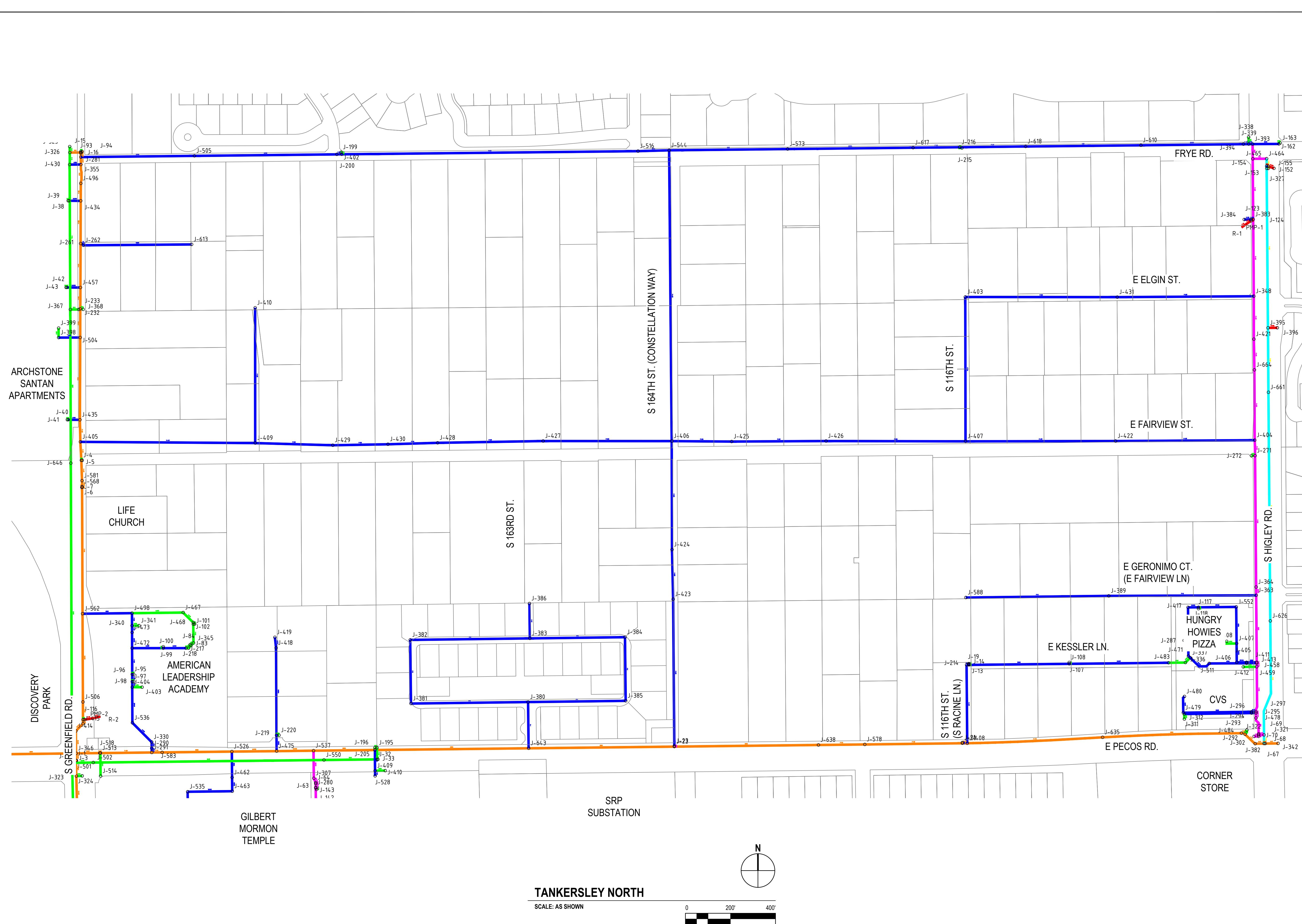


Label	Elevation (ft)	Flow (gpm)	Hydraulic Grade (ft)
R-1	1,300.00	187	1,300.00
R-2	1,287.10	460	1,287.10
R-3	1,285.38	0	1,285.38

LEGEND

PIPE DIAMETER (INCH)

	<= 4.0
	<= 6.0
	<= 8.0
	<= 12.0
	<= 16.0
	<= 30.0



No.	Issue	Drawn	Approved	Date

Bar is one inch on original size sheet
0 1"

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Designer S.DURAN
Drafting Check Z. POPE
Design Check Z. POPE
Project Manager M. WORLTON
Date AUGUST 2017
This document shall not be used for construction unless signed and sealed for construction.

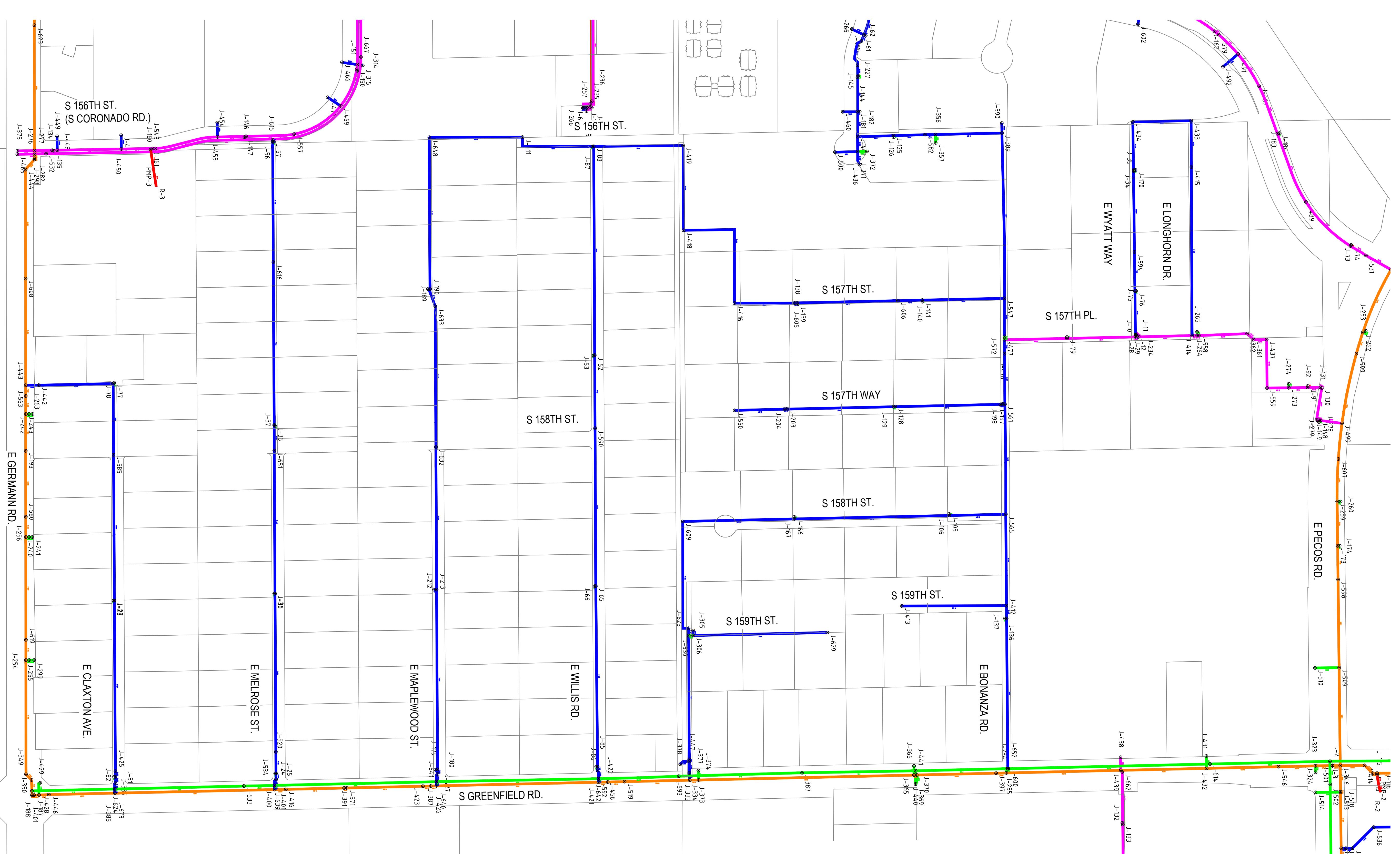
Client TOWN OF GILBERT
Project WATERLINE TANKERSLEY REPLACEMENT
Title TANKERSLEY NORTH
PROPOSED WATER SYSTEM
Project No. 11136654

Original Size Arch D Sheet No. WATERCAD EXHIBIT

Sheet 3 of 4

LEGEND

PIPE DIAMETER (INCH)
≤ 4.0
≤ 6.0
≤ 8.0
≤ 12.0
≤ 16.0
≤ 30.0



TANKERSLEY SOUTH

SCALE: AS SHOWN

Bar is one inch on
original size sheet
0 1"

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No.	Issue	Drawn	Approved	Date

Plot Date: 11 August 2017 - 4:40 PM

Plotted By: Saul Duran

File Name: G:\111\11136654 City of Gilbert Tankersley Waterline Prj\06-CAD\Drawings\11136654-PROPOSED SOUTH.dwg



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Project Manager M. WORLTON	Date AUGUST 2017

Client TOWN OF GILBERT
Project WATERLINE TANKERSLEY REPLACEMENT
Title TANKERSLEY SOUTH
Proposed Water System
Project No. 11136654

Original Size Arch D Sheet No. WATERCAD EXHIBIT

Sheet 4 of 4



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,286.21	0	1,458.01	74
J-2	1,286.20	0	1,458.01	74
J-3	1,286.21	0	1,458.01	74
J-4	1,287.47	0	1,458.01	74
J-5	1,287.47	4	1,458.01	74
J-6	1,287.63	0	1,458.01	74
J-7	1,287.63	0	1,458.01	74
J-10	1,282.55	0	1,457.98	76
J-11	1,282.55	0	1,457.98	76
J-12	1,282.56	0	1,457.98	76
J-13	1,295.30	2	1,458.03	70
J-14	1,295.31	0	1,458.03	70
J-15	1,286.20	0	1,458.01	74
J-16	1,286.20	0	1,458.01	74
J-19	1,295.33	0	1,458.03	70
J-20	1,296.92	0	1,458.03	70
J-21	1,296.71	0	1,458.03	70
J-22	1,290.04	0	1,458.02	73
J-23	1,290.02	1	1,458.02	73
J-24	1,293.63	0	1,457.99	71
J-25	1,293.62	0	1,457.99	71
J-26	1,291.44	0	1,457.99	72
J-27	1,291.45	3	1,457.99	72
J-28	1,282.60	0	1,457.98	76
J-29	1,282.58	0	1,457.98	76
J-30	1,291.91	0	1,457.98	72
J-31	1,291.90	3	1,457.98	72
J-32	1,288.87	0	1,458.01	73
J-33	1,288.88	0	1,458.01	73
J-34	1,280.00	0	1,457.98	77
J-35	1,280.00	3	1,457.98	77
J-36	1,290.00	2	1,457.98	73
J-37	1,290.00	0	1,457.98	73
J-38	1,286.06	0	1,458.01	74
J-39	1,286.06	0	1,458.01	74
J-40	1,287.34	0	1,458.01	74
J-41	1,287.33	0	1,458.01	74
J-42	1,286.02	0	1,458.01	74
J-43	1,286.02	0	1,458.01	74
J-52	1,282.73	3	1,457.98	76
J-53	1,282.76	0	1,457.98	76
J-56	1,284.34	0	1,457.98	75
J-57	1,284.34	0	1,457.98	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-63	1,288.88	0	1,458.01	73
J-64	1,288.88	0	1,458.01	73
J-65	1,289.81	3	1,457.99	73
J-66	1,289.79	0	1,457.99	73
J-67	1,300.00	0	1,458.04	68
J-68	1,300.00	0	1,458.04	68
J-69	1,300.00	0	1,458.04	68
J-70	1,300.00	0	1,458.04	68
J-73	1,281.08	0	1,458.01	77
J-74	1,281.07	0	1,458.01	77
J-75	1,281.71	3	1,457.98	76
J-76	1,281.72	0	1,457.98	76
J-77	1,290.00	0	1,457.99	73
J-78	1,290.00	2	1,457.99	73
J-79	1,282.29	3	1,457.98	76
J-80	1,282.26	0	1,457.98	76
J-81	1,294.53	0	1,457.99	71
J-82	1,294.54	0	1,457.99	71
J-83	1,288.32	0	1,458.01	73
J-84	1,288.30	0	1,458.01	73
J-85	1,290.29	2	1,457.99	73
J-86	1,290.32	0	1,457.99	73
J-87	1,282.10	0	1,457.98	76
J-88	1,282.07	2	1,457.98	76
J-91	1,282.43	0	1,457.98	76
J-92	1,282.41	0	1,457.98	76
J-93	1,286.20	0	1,458.01	74
J-94	1,286.19	0	1,458.01	74
J-95	1,287.69	0	1,458.01	74
J-96	1,287.71	0	1,458.01	74
J-97	1,287.75	0	1,458.01	74
J-98	1,287.77	5	1,458.01	74
J-99	1,287.97	0	1,458.01	74
J-100	1,287.97	0	1,458.01	74
J-101	1,288.28	0	1,458.01	73
J-102	1,288.30	0	1,458.01	73
J-105	1,285.07	0	1,457.99	75
J-106	1,285.10	2	1,457.99	75
J-107	1,296.73	3	1,458.03	70
J-108	1,296.73	0	1,458.03	70
J-115	1,287.08	0	1,458.01	74
J-116	1,287.10	0	1,458.02	74
J-117	1,299.66	0	1,458.04	69

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-118	1,299.61	0	1,458.04	69
J-123	1,300.00	0	1,458.06	68
J-124	1,300.00	0	1,458.06	68
J-125	1,280.00	0	1,457.98	77
J-126	1,280.00	0	1,457.98	77
J-128	1,282.74	0	1,457.98	76
J-129	1,282.74	2	1,457.98	76
J-130	1,282.41	0	1,457.98	76
J-131	1,282.41	0	1,457.98	76
J-132	1,287.94	0	1,458.01	74
J-133	1,287.95	0	1,458.01	74
J-134	1,287.33	0	1,457.99	74
J-135	1,287.29	0	1,457.99	74
J-136	1,287.37	2	1,457.99	74
J-137	1,287.36	0	1,457.99	74
J-138	1,280.26	0	1,457.98	77
J-139	1,280.30	0	1,457.98	77
J-140	1,280.86	0	1,457.98	77
J-141	1,280.83	1	1,457.98	77
J-142	1,288.87	0	1,458.01	73
J-143	1,288.87	0	1,458.01	73
J-144	1,280.00	0	1,457.99	77
J-145	1,280.00	0	1,457.99	77
J-146	1,284.22	0	1,457.99	75
J-147	1,284.23	0	1,457.99	75
J-148	1,282.74	0	1,457.98	76
J-149	1,282.75	0	1,457.98	76
J-150	1,282.53	0	1,457.99	76
J-151	1,282.57	0	1,457.99	76
J-152	1,300.00	0	1,458.04	68
J-153	1,300.00	0	1,458.04	68
J-154	1,300.00	0	1,458.04	68
J-155	1,300.00	0	1,458.04	68
J-160	1,285.34	0	1,457.99	75
J-161	1,285.38	0	1,457.99	75
J-162	1,300.00	0	1,458.04	68
J-163	1,300.00	0	1,458.04	68
J-164	1,287.53	0	1,458.01	74
J-165	1,287.55	0	1,458.01	74
J-166	1,284.46	0	1,457.99	75
J-167	1,284.51	2	1,457.99	75
J-170	1,280.00	0	1,457.98	77
J-173	1,283.43	0	1,458.01	76



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-174	1,283.62	0	1,458.01	75
J-179	1,293.02	0	1,457.99	71
J-180	1,293.00	2	1,457.99	71
J-181	1,280.00	0	1,457.98	77
J-182	1,280.00	0	1,457.98	77
J-183	1,280.00	2	1,458.00	77
J-184	1,280.00	0	1,458.00	77
J-185	1,282.23	0	1,457.99	76
J-186	1,282.18	0	1,457.99	76
J-187	1,294.21	0	1,457.99	71
J-188	1,294.19	0	1,457.99	71
J-189	1,286.00	0	1,457.98	74
J-190	1,285.95	2	1,457.98	74
J-193	1,290.04	0	1,457.99	73
J-195	1,287.68	0	1,458.01	74
J-196	1,287.66	0	1,458.01	74
J-197	1,283.22	0	1,457.98	76
J-198	1,283.22	0	1,457.98	76
J-199	1,288.46	0	1,458.01	73
J-200	1,288.48	0	1,458.01	73
J-203	1,282.25	0	1,457.98	76
J-204	1,282.24	2	1,457.98	76
J-205	1,288.69	0	1,458.01	73
J-212	1,290.41	0	1,457.98	73
J-213	1,290.38	3	1,457.98	73
J-214	1,295.27	0	1,458.03	70
J-215	1,295.85	0	1,458.03	70
J-216	1,295.80	0	1,458.03	70
J-217	1,288.26	0	1,458.01	73
J-218	1,288.29	0	1,458.01	73
J-219	1,288.80	1	1,458.01	73
J-220	1,288.83	0	1,458.01	73
J-227	1,280.00	0	1,457.99	77
J-232	1,286.38	0	1,458.01	74
J-233	1,286.35	0	1,458.01	74
J-234	1,282.61	3	1,457.98	76
J-235	1,282.14	0	1,457.99	76
J-236	1,282.11	0	1,457.99	76
J-239	1,282.11	0	1,457.99	76
J-240	1,290.00	0	1,457.99	73
J-241	1,290.00	0	1,457.99	73
J-242	1,290.00	0	1,457.99	73
J-243	1,290.00	0	1,457.99	73



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-252	1,282.06	0	1,458.01	76
J-253	1,282.03	0	1,458.01	76
J-254	1,291.78	0	1,457.99	72
J-255	1,291.80	0	1,457.99	72
J-256	1,290.00	0	1,457.99	73
J-257	1,282.23	0	1,457.99	76
J-259	1,283.04	0	1,458.01	76
J-260	1,282.85	0	1,458.01	76
J-261	1,286.03	0	1,458.01	74
J-262	1,286.06	2	1,458.01	74
J-263	1,290.00	0	1,457.99	73
J-264	1,282.88	0	1,457.98	76
J-265	1,282.80	0	1,457.98	76
J-266	1,282.32	0	1,457.99	76
J-271	1,300.00	2	1,458.04	68
J-272	1,300.00	0	1,458.04	68
J-273	1,282.48	2	1,457.98	76
J-274	1,282.44	0	1,457.98	76
J-276	1,287.84	0	1,457.99	74
J-277	1,287.86	0	1,457.99	74
J-278	1,282.73	0	1,457.98	76
J-279	1,282.74	0	1,457.98	76
J-280	1,288.87	0	1,458.01	73
J-281	1,286.24	0	1,458.01	74
J-282	1,287.88	0	1,457.99	74
J-284	1,289.28	0	1,458.00	73
J-285	1,289.33	0	1,458.00	73
J-286	1,298.92	2	1,458.04	69
J-287	1,298.85	0	1,458.04	69
J-290	1,285.77	0	1,458.01	75
J-291	1,286.38	0	1,458.01	74
J-292	1,300.00	0	1,458.04	68
J-293	1,300.00	0	1,458.04	68
J-294	1,300.00	0	1,458.04	68
J-295	1,300.00	0	1,458.04	68
J-296	1,300.00	0	1,458.04	68
J-297	1,300.00	0	1,458.04	68
J-298	1,287.88	0	1,457.99	74
J-299	1,291.84	0	1,457.99	72
J-302	1,300.00	0	1,458.04	68
J-305	1,287.21	0	1,457.99	74
J-306	1,287.32	0	1,457.99	74
J-307	1,288.89	0	1,458.01	73

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-311	1,300.00	0	1,458.04	68
J-312	1,299.91	0	1,458.04	68
J-314	1,282.43	0	1,457.99	76
J-315	1,282.43	0	1,457.99	76
J-321	1,300.00	0	1,458.04	68
J-322	1,300.00	0	1,458.04	68
J-323	1,286.23	0	1,458.01	74
J-324	1,286.30	0	1,458.01	74
J-325	1,286.06	0	1,458.01	74
J-326	1,286.10	0	1,458.01	74
J-327	1,300.00	0	1,458.04	68
J-330	1,287.12	0	1,458.01	74
J-333	1,290.06	0	1,457.99	73
J-334	1,290.00	0	1,457.99	73
J-336	1,299.05	0	1,458.03	69
J-337	1,299.07	0	1,458.03	69
J-338	1,300.00	0	1,458.04	68
J-339	1,300.00	0	1,458.04	68
J-340	1,287.48	0	1,458.01	74
J-341	1,287.57	0	1,458.01	74
J-342	1,300.00	0	1,458.04	68
J-345	1,288.34	0	1,458.01	73
J-346	1,285.59	0	1,458.01	75
J-348	1,300.00	0	1,458.05	68
J-349	1,293.78	0	1,457.99	71
J-350	1,293.92	0	1,457.99	71
J-355	1,286.32	0	1,458.01	74
J-356	1,280.00	0	1,457.98	77
J-357	1,280.00	2	1,457.98	77
J-361	1,282.53	0	1,457.98	76
J-362	1,282.60	2	1,457.98	76
J-363	1,300.00	0	1,458.04	68
J-364	1,300.00	0	1,458.04	68
J-365	1,290.00	1	1,458.00	73
J-366	1,290.00	0	1,458.00	73
J-367	1,286.28	0	1,458.01	74
J-368	1,286.34	0	1,458.01	74
J-369	1,290.00	0	1,458.00	73
J-370	1,290.00	0	1,458.00	73
J-371	1,280.00	0	1,457.98	77
J-372	1,280.00	0	1,457.98	77
J-373	1,290.21	0	1,457.99	73
J-374	1,290.16	0	1,457.99	73

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-375	1,288.34	0	1,457.99	73
J-377	1,290.00	0	1,457.99	73
J-378	1,290.00	0	1,457.99	73
J-382	1,300.00	0	1,458.04	68
J-383	1,300.00	0	1,458.05	68
J-384	1,300.00	1	1,458.06	68
J-385	1,294.82	0	1,457.99	71
J-386	1,294.65	0	1,457.99	71
J-387	1,293.18	0	1,457.99	71
J-389	1,280.00	2	1,457.98	77
J-390	1,280.00	0	1,457.98	77
J-391	1,293.13	0	1,457.99	71
J-393	1,300.00	0	1,458.04	68
J-394	1,299.97	0	1,458.04	68
J-395	1,300.00	0	1,458.04	68
J-396	1,300.00	0	1,458.04	68
J-397	1,289.50	0	1,458.00	73
J-398	1,286.59	0	1,458.01	74
J-399	1,286.50	0	1,458.01	74
J-400	1,293.77	0	1,457.99	71
J-401	1,293.66	0	1,457.99	71
J-402	1,288.43	0	1,458.01	73
J-403	1,287.92	0	1,458.01	74
J-404	1,287.79	0	1,458.01	74
J-405	1,300.00	0	1,458.04	68
J-406	1,300.00	0	1,458.04	68
J-407	1,299.84	0	1,458.04	68
J-408	1,299.64	0	1,458.04	69
J-409	1,289.66	0	1,458.01	73
J-410	1,289.78	0	1,458.01	73
J-411	1,300.00	0	1,458.04	68
J-412	1,300.00	0	1,458.04	68
J-413	1,300.00	0	1,458.04	68
J-414	1,286.64	0	1,458.01	74
J-415	1,287.00	0	1,458.01	74
J-416	1,293.68	0	1,457.99	71
J-417	1,299.52	0	1,458.04	69
J-418	1,289.42	2	1,458.01	73
J-419	1,289.36	0	1,458.01	73
J-421	1,290.23	0	1,457.99	73
J-422	1,290.24	0	1,457.99	73
J-423	1,293.26	0	1,457.99	71
J-425	1,294.44	2	1,457.99	71



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-426	1,293.12	0	1,457.99	71
J-427	1,293.03	0	1,457.99	71
J-428	1,294.24	0	1,457.99	71
J-429	1,294.04	0	1,457.99	71
J-430	1,286.20	0	1,458.01	74
J-431	1,286.36	0	1,458.00	74
J-432	1,286.47	0	1,458.00	74
J-434	1,286.19	0	1,458.01	74
J-435	1,287.44	2	1,458.01	74
J-436	1,280.00	0	1,457.98	77
J-437	1,282.31	0	1,457.98	76
J-438	1,287.29	32	1,458.00	74
J-439	1,287.36	0	1,458.00	74
J-440	1,290.00	0	1,457.99	73
J-441	1,290.00	0	1,457.99	73
J-442	1,290.00	0	1,457.99	73
J-443	1,290.00	0	1,457.99	73
J-444	1,288.18	0	1,457.99	73
J-446	1,294.31	0	1,457.99	71
J-447	1,290.00	0	1,457.99	73
J-448	1,287.18	0	1,457.99	74
J-449	1,287.13	0	1,457.99	74
J-450	1,285.92	10	1,457.99	74
J-451	1,285.80	0	1,457.99	74
J-453	1,284.32	0	1,457.99	75
J-454	1,284.01	0	1,457.99	75
J-456	1,290.26	0	1,457.99	73
J-457	1,286.15	0	1,458.01	74
J-458	1,300.00	0	1,458.04	68
J-459	1,300.00	0	1,458.04	68
J-460	1,280.00	0	1,457.98	77
J-461	1,280.00	0	1,457.98	77
J-462	1,287.98	0	1,458.01	74
J-463	1,287.94	0	1,458.01	74
J-464	1,300.00	0	1,458.04	68
J-465	1,300.00	0	1,458.04	68
J-466	1,282.42	0	1,457.99	76
J-467	1,288.08	1	1,458.01	74
J-468	1,288.27	0	1,458.01	73
J-469	1,283.38	0	1,457.99	76
J-470	1,283.23	0	1,457.99	76
J-471	1,299.01	0	1,458.04	69
J-472	1,287.57	0	1,458.01	74

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-473	1,287.52	0	1,458.01	74
J-475	1,287.67	0	1,458.01	74
J-476	1,282.27	0	1,457.98	76
J-477	1,281.94	0	1,457.98	76
J-478	1,300.00	0	1,458.04	68
J-479	1,299.86	0	1,458.04	68
J-480	1,299.61	1	1,458.04	69
J-483	1,298.69	1	1,458.03	69
J-484	1,300.00	0	1,458.04	68
J-485	1,288.36	0	1,457.99	73
J-487	1,280.00	0	1,458.00	77
J-489	1,280.82	0	1,458.00	77
J-491	1,280.00	0	1,458.00	77
J-492	1,280.00	0	1,458.00	77
J-496	1,286.29	0	1,458.01	74
J-498	1,287.40	0	1,458.01	74
J-499	1,282.76	0	1,457.98	76
J-500	1,280.00	8	1,457.98	77
J-501	1,286.30	0	1,458.01	74
J-502	1,286.55	0	1,458.01	74
J-504	1,286.78	0	1,458.01	74
J-505	1,287.22	0	1,458.01	74
J-506	1,287.19	0	1,458.01	74
J-509	1,284.54	0	1,458.01	75
J-510	1,285.23	0	1,458.01	75
J-511	1,299.59	0	1,458.04	69
J-512	1,280.00	0	1,457.99	77
J-513	1,285.85	0	1,458.01	74
J-514	1,286.50	0	1,458.01	74
J-516	1,290.00	1	1,458.02	73
J-518	1,285.84	0	1,458.01	74
J-519	1,290.31	0	1,457.99	73
J-520	1,293.47	2	1,457.99	71
J-524	1,281.77	0	1,458.01	76
J-526	1,287.21	0	1,458.01	74
J-528	1,289.60	0	1,458.01	73
J-531	1,281.18	0	1,458.01	77
J-532	1,287.52	0	1,457.99	74
J-533	1,294.10	0	1,457.99	71
J-534	1,293.74	0	1,457.99	71
J-535	1,287.45	0	1,458.01	74
J-536	1,287.54	0	1,458.01	74
J-537	1,288.06	1	1,458.01	74

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-543	1,285.32	0	1,457.99	75
J-544	1,290.00	1	1,458.02	73
J-546	1,286.30	0	1,458.01	74
J-547	1,281.20	1	1,457.98	76
J-550	1,288.60	0	1,458.01	73
J-552	1,299.98	0	1,458.04	68
J-557	1,284.17	0	1,457.99	75
J-558	1,282.88	2	1,457.98	76
J-559	1,282.73	0	1,457.98	76
J-560	1,282.06	1	1,457.98	76
J-561	1,283.24	2	1,457.98	76
J-562	1,286.82	0	1,458.01	74
J-563	1,290.00	0	1,457.99	73
J-565	1,285.36	0	1,457.99	75
J-568	1,287.63	0	1,458.01	74
J-571	1,293.10	0	1,457.99	71
J-572	1,282.00	0	1,457.98	76
J-573	1,292.36	0	1,458.02	72
J-578	1,294.30	5	1,458.03	71
J-579	1,280.00	0	1,458.00	77
J-580	1,290.00	0	1,457.99	73
J-581	1,287.61	3	1,458.01	74
J-582	1,280.00	0	1,457.98	77
J-583	1,286.49	0	1,458.01	74
J-585	1,290.00	2	1,457.99	73
J-588	1,296.06	5	1,458.04	70
J-590	1,284.18	2	1,457.98	75
J-592	1,290.15	0	1,457.99	73
J-593	1,290.05	0	1,457.99	73
J-594	1,280.96	0	1,457.98	77
J-596	1,287.73	0	1,458.01	74
J-597	1,280.52	0	1,457.99	77
J-598	1,283.73	0	1,458.01	75
J-599	1,282.35	0	1,458.01	76
J-600	1,289.29	1	1,458.00	73
J-602	1,280.00	0	1,458.00	77
J-605	1,280.25	3	1,457.98	77
J-606	1,280.72	1	1,457.98	77
J-607	1,282.85	0	1,458.01	76
J-608	1,289.62	10	1,457.99	73
J-609	1,284.63	1	1,457.99	75
J-610	1,298.28	0	1,458.04	69
J-613	1,287.22	2	1,458.01	74

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-614	1,286.42	0	1,458.00	74
J-615	1,284.29	0	1,457.98	75
J-616	1,287.06	5	1,457.98	74
J-617	1,294.88	1	1,458.03	71
J-618	1,297.09	0	1,458.03	70
J-619	1,291.42	0	1,457.99	72
J-620	1,280.00	0	1,457.99	77
J-623	1,287.65	0	1,457.99	74
J-624	1,294.76	0	1,457.99	71
J-625	1,287.04	0	1,457.99	74
J-626	1,300.00	0	1,458.04	68
J-627	1,280.00	0	1,457.99	77
J-628	1,282.30	0	1,457.99	76
J-629	1,287.12	2	1,457.99	74
J-630	1,287.21	2	1,457.99	74
J-632	1,287.88	3	1,457.98	74
J-633	1,285.82	2	1,457.98	74
J-635	1,300.00	0	1,458.03	68
J-638	1,293.02	0	1,458.02	71
J-639	1,293.71	0	1,457.99	71
J-640	1,293.11	0	1,457.99	71
J-641	1,293.07	0	1,457.99	71
J-642	1,290.16	0	1,457.99	73
J-643	1,290.00	0	1,458.02	73
J-646	1,287.37	0	1,458.01	74
J-648	1,283.82	2	1,457.98	75
J-649	1,289.38	0	1,458.01	73
J-651	1,290.10	2	1,457.98	73
J-652	1,289.27	0	1,458.00	73
J-661	1,300.00	0	1,458.04	68
J-662	1,287.37	0	1,458.01	74
J-664	1,300.00	2	1,458.05	68
J-667	1,282.25	0	1,457.99	76
J-673	1,294.74	0	1,457.99	71
J-1	1,280.00	0	1,457.99	77
J-2	1,280.00	0	1,457.99	77
J-5	1,280.32	0	1,457.99	77
J-6	1,280.33	0	1,457.99	77
J-7	1,280.26	0	1,457.99	77
J-8	1,280.27	0	1,457.99	77
J-9	1,280.00	0	1,457.99	77
J-10	1,280.00	0	1,457.99	77
J-13	1,280.00	0	1,457.99	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-14	1,280.00	0	1,457.99	77
J-15	1,280.00	0	1,457.99	77
J-16	1,280.00	0	1,457.99	77
J-17	1,280.00	0	1,457.99	77
J-18	1,280.00	0	1,457.99	77
J-19	1,280.00	0	1,457.99	77
J-20	1,280.00	0	1,457.99	77
J-21	1,280.00	0	1,458.00	77
J-22	1,280.00	0	1,458.00	77
J-23	1,280.20	0	1,457.99	77
J-24	1,280.23	0	1,457.99	77
J-33	1,280.00	0	1,457.99	77
J-34	1,280.00	0	1,457.99	77
J-43	1,280.00	0	1,457.99	77
J-44	1,280.00	0	1,457.99	77
J-47	1,280.00	0	1,457.99	77
J-48	1,280.00	0	1,457.99	77
J-49	1,280.29	0	1,457.99	77
J-50	1,280.32	0	1,457.99	77
J-51	1,283.91	0	1,457.99	75
J-52	1,283.91	0	1,457.99	75
J-53	1,281.92	0	1,457.99	76
J-54	1,281.95	0	1,457.99	76
J-55	1,280.00	0	1,457.99	77
J-56	1,280.00	0	1,457.99	77
J-61	1,280.00	0	1,457.99	77
J-62	1,280.00	0	1,457.99	77
J-63	1,280.00	0	1,458.00	77
J-64	1,280.00	0	1,458.00	77
J-65	1,280.00	0	1,458.00	77
J-66	1,280.00	0	1,458.00	77
J-67	1,280.00	0	1,457.99	77
J-68	1,280.00	0	1,457.99	77
J-69	1,280.00	0	1,457.99	77
J-70	1,280.00	0	1,457.99	77
J-71	1,280.00	0	1,457.99	77
J-72	1,280.00	0	1,457.99	77
J-73	1,280.00	0	1,457.99	77
J-74	1,280.00	0	1,457.99	77
J-77	1,280.00	0	1,457.99	77
J-78	1,280.00	0	1,457.99	77
J-81	1,280.00	0	1,457.99	77
J-82	1,280.00	0	1,457.99	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-85	1,280.00	0	1,457.99	77
J-86	1,280.00	0	1,457.99	77
J-91	1,280.00	0	1,457.99	77
J-101	1,280.00	0	1,457.99	77
J-102	1,280.00	0	1,457.99	77
J-106	1,280.00	0	1,457.99	77
J-107	1,280.00	0	1,457.99	77
J-120	1,280.41	0	1,457.99	77
J-121	1,280.41	0	1,457.99	77
J-125	1,280.00	0	1,457.99	77
J-126	1,280.00	0	1,457.99	77
J-129	1,286.89	0	1,457.99	74
J-131	1,280.34	0	1,457.99	77
J-132	1,280.25	0	1,457.99	77
J-137	1,280.00	0	1,457.99	77
J-138	1,280.00	0	1,457.99	77
J-139	1,280.00	0	1,457.99	77
J-140	1,280.00	0	1,457.99	77
J-142	1,280.00	0	1,457.99	77
J-143	1,280.00	0	1,457.99	77
J-150	1,280.00	0	1,457.99	77
J-151	1,280.00	0	1,457.99	77
J-152	1,280.00	0	1,457.99	77
J-153	1,280.00	0	1,457.99	77
J-154	1,280.00	0	1,457.99	77
J-155	1,280.00	0	1,457.99	77
J-156	1,280.00	0	1,457.99	77
J-157	1,280.00	0	1,457.99	77
J-163	1,280.00	0	1,457.99	77
J-164	1,280.00	0	1,457.99	77
J-165	1,280.00	0	1,457.99	77
J-166	1,280.00	0	1,457.99	77
J-167	1,280.00	0	1,458.00	77
J-168	1,280.00	0	1,457.99	77
J-169	1,280.00	0	1,457.99	77
J-171	1,280.00	0	1,457.99	77
J-172	1,280.00	0	1,457.99	77
J-177	1,280.00	0	1,457.99	77
J-178	1,280.00	0	1,457.99	77
J-181	1,284.14	0	1,457.99	75
J-185	1,280.00	0	1,457.99	77
J-186	1,280.00	0	1,457.99	77
J-189	1,280.00	0	1,457.99	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-190	1,280.00	0	1,457.99	77
J-191	1,280.00	0	1,457.99	77
J-192	1,280.00	0	1,457.99	77
J-193	1,280.00	0	1,457.99	77
J-194	1,280.00	0	1,457.99	77
J-195	1,280.46	0	1,457.99	77
J-196	1,280.32	0	1,457.99	77
J-197	1,283.77	0	1,457.99	75
J-200	1,280.00	0	1,457.99	77
J-201	1,280.00	0	1,457.99	77
J-202	1,280.09	0	1,457.99	77
J-203	1,280.00	0	1,457.99	77
J-204	1,280.11	0	1,457.99	77
J-209	1,280.12	0	1,457.99	77
J-210	1,280.00	0	1,457.99	77
J-212	1,280.00	0	1,457.99	77
J-213	1,280.00	0	1,457.99	77
J-214	1,280.00	0	1,457.99	77
J-215	1,280.00	0	1,457.99	77
J-222	1,280.21	0	1,457.99	77
J-223	1,280.00	0	1,457.99	77
J-224	1,280.00	0	1,457.99	77
J-225	1,280.00	0	1,457.99	77
J-226	1,280.00	0	1,457.99	77
J-227	1,280.00	0	1,457.99	77
J-229	1,284.25	0	1,457.99	75
J-231	1,280.00	0	1,457.99	77
J-232	1,285.15	0	1,457.99	75
J-233	1,285.17	0	1,457.99	75
J-235	1,281.81	0	1,457.99	76
J-237	1,283.17	0	1,457.99	76
J-239	1,285.61	0	1,457.99	75
J-242	1,286.43	0	1,457.99	74
J-244	1,280.00	0	1,457.99	77
J-245	1,280.00	0	1,457.99	77
J-246	1,280.00	0	1,457.99	77
J-247	1,280.00	0	1,457.99	77
J-250	1,283.79	0	1,457.99	75
J-254	1,280.26	0	1,457.99	77
J-255	1,280.53	0	1,457.99	77
J-260	1,280.00	0	1,457.99	77
J-262	1,280.08	0	1,457.99	77
J-263	1,280.02	0	1,457.99	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-266	1,280.00	0	1,457.99	77
J-268	1,280.56	0	1,457.99	77
J-270	1,280.00	0	1,457.99	77
J-272	1,285.07	0	1,457.99	75
J-276	1,280.00	0	1,457.99	77
J-277	1,280.00	0	1,457.99	77
J-282	1,283.67	0	1,457.99	75
J-284	1,280.00	0	1,457.99	77
J-287	1,280.00	0	1,457.99	77
J-291	1,280.00	0	1,458.00	77
J-293	1,280.00	0	1,458.00	77
J-296	1,280.00	0	1,457.99	77
J-297	1,280.00	0	1,457.99	77
J-298	1,280.00	0	1,457.99	77
J-301	1,280.00	0	1,457.99	77
J-302	1,280.00	0	1,457.99	77
J-312	1,280.00	0	1,457.99	77
J-321	1,280.00	0	1,457.99	77
J-322	1,280.00	0	1,457.99	77
J-324	1,280.00	0	1,458.00	77
J-325	1,280.00	0	1,458.00	77
J-326	1,280.00	0	1,457.99	77
J-327	1,280.00	0	1,457.99	77
J-331	1,280.00	0	1,457.99	77
J-332	1,280.00	0	1,457.99	77
J-336	1,280.00	0	1,457.99	77
J-340	1,280.00	0	1,457.99	77
J-343	1,280.00	0	1,457.99	77
J-349	1,280.00	0	1,457.99	77
J-353	1,280.00	0	1,457.99	77
J-355	1,280.00	0	1,457.99	77
J-363	1,280.00	0	1,457.99	77
J-365	1,280.00	0	1,457.99	77
J-366	1,280.55	0	1,457.99	77
J-367	1,280.00	0	1,457.99	77
J-370	1,280.00	0	1,457.99	77
J-372	1,280.00	0	1,457.99	77
J-373	1,280.00	0	1,457.99	77
J-375	1,280.00	0	1,457.99	77
J-378	1,280.00	0	1,458.00	77
J-380	1,291.16	3	1,458.01	72
J-381	1,290.64	2	1,458.01	72
J-382	1,291.34	3	1,458.01	72



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-383	1,292.53	3	1,458.01	72
J-384	1,293.13	2	1,458.01	71
J-385	1,291.24	2	1,458.01	72
J-386	1,292.88	2	1,458.01	71
J-387	1,290.03	2	1,457.99	73
J-389	1,298.00	2	1,458.04	69
J-401	1,294.11	0	1,457.99	71
J-403	1,296.44	3	1,458.04	70
J-404	1,300.00	0	1,458.04	68
J-405	1,287.46	0	1,458.01	74
J-406	1,293.77	5	1,458.02	71
J-407	1,296.91	3	1,458.03	70
J-408	1,297.02	0	1,458.03	70
J-409	1,289.32	0	1,458.01	73
J-410	1,287.47	3	1,458.01	74
J-411	1,282.10	0	1,457.98	76
J-412	1,287.12	0	1,457.99	74
J-413	1,287.12	0	1,457.99	74
J-414	1,282.85	0	1,457.98	76
J-415	1,282.85	0	1,457.98	76
J-416	1,280.25	0	1,457.98	77
J-418	1,280.25	0	1,457.98	77
J-419	1,282.07	0	1,457.98	76
J-421	1,300.00	1	1,458.05	68
J-422	1,298.51	3	1,458.04	69
J-423	1,291.83	4	1,458.02	72
J-424	1,292.44	3	1,458.02	72
J-425	1,294.41	3	1,458.02	71
J-426	1,295.42	6	1,458.02	70
J-427	1,292.40	6	1,458.01	72
J-428	1,291.27	5	1,458.01	72
J-429	1,290.15	5	1,458.01	73
J-430	1,290.74	4	1,458.01	72
J-431	1,296.44	3	1,458.04	70
J-433	1,280.00	0	1,457.98	77
J-434	1,280.00	0	1,457.98	77



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
1907	1015	J-661	J-626	30	Ductile Iron	130	0.0	87.00	0.0400
1908	62	J-464	J-465	12	Ductile Iron	130	0.0	-87.00	0.2500
3565	8	J-166	J-167	6	Ductile Iron	130	0.0	0.00	0.0000
3566	6	J-105	J-106	6	Ductile Iron	130	0.0	0.00	0.0000
3961	6	J-93	J-94	6	Ductile Iron	130	0.0	0.00	0.0000
3962	49	J-15	J-326	16	Ductile Iron	130	0.0	1.00	0.0000
3963	2	J-15	J-16	16	Ductile Iron	130	0.0	-1.00	0.0000
3983	526	J-573	J-544	8	Ductile Iron	130	0.0	16.00	0.1000
4153	512	J-618	J-610	8	Ductile Iron	130	0.0	-17.00	0.1100
4154	14	J-215	J-216	6	Ductile Iron	130	0.0	0.00	0.0000
4308	289	J-585	J-78	8	Ductile Iron	130	0.0	-2.00	0.0100
4311	9	J-189	J-190	8	Ductile Iron	130	0.0	0.00	0.0000
8447	57	J-68	J-342	16	Ductile Iron	130	0.0	0.00	0.0000
8449	40	J-382	J-67	16	Ductile Iron	130	0.0	-100.00	0.1600
8823	20	J-302	J-70	12	Ductile Iron	130	0.0	0.00	0.0000
8825	75	J-478	J-322	12	Ductile Iron	130	0.0	13.00	0.0400
12390	66	J-465	J-393	12	Ductile Iron	130	0.0	17.00	0.0500
12392	31	J-338	J-339	6	Ductile Iron	130	0.0	0.00	0.0000
12393	297	J-411	J-363	12	Ductile Iron	130	0.0	-16.00	0.0500
12397	682	J-367	J-646	6	Ductile Iron	130	0.0	3.00	0.0300
12398	4	J-32	J-33	6	Ductile Iron	130	0.0	0.00	0.0000
12401	236	J-550	J-32	6	Ductile Iron	130	0.0	-5.00	0.0600
12402	1024	J-502	J-550	6	Ductile Iron	130	0.0	-5.00	0.0600
14458	206	J-561	J-476	8	Ductile Iron	130	0.0	13.00	0.0800
14460	442	J-204	J-129	8	Ductile Iron	130	0.0	-2.00	0.0200
14461	11	J-203	J-204	8	Ductile Iron	130	0.0	0.00	0.0000
14462	7	J-128	J-129	6	Ductile Iron	130	0.0	0.00	0.0000
14463	11	J-197	J-198	8	Ductile Iron	130	0.0	0.00	0.0000
14465	447	J-565	J-561	8	Ductile Iron	130	0.0	19.00	0.1200
14466	630	J-106	J-167	8	Ductile Iron	130	0.0	-5.00	0.0300
14467	610	J-284	J-136	8	Ductile Iron	130	0.0	18.00	0.1100
14477	525	J-624	J-533	6	Ductile Iron	130	0.0	-1.00	0.0100
14478	694	J-27	J-425	8	Ductile Iron	130	0.0	-3.00	0.0200
14479	657	J-639	J-640	6	Ductile Iron	130	0.0	-2.00	0.0200
14481	658	J-641	J-642	6	Ductile Iron	130	0.0	-3.00	0.0400
14483	8	J-179	J-180	8	Ductile Iron	130	0.0	0.00	0.0000
14484	10	J-212	J-213	8	Ductile Iron	130	0.0	0.00	0.0000
14485	5	J-81	J-82	6	Ductile Iron	130	0.0	0.00	0.0000
14486	3	J-26	J-27	6	Ductile Iron	130	0.0	0.00	0.0000
14487	3	J-24	J-25	6	Ductile Iron	130	0.0	0.00	0.0000
14488	4	J-30	J-31	6	Ductile Iron	130	0.0	0.00	0.0000
14494	1330	J-646	J-501	6	Ductile Iron	130	0.0	3.00	0.0300

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
14496	26	J-325	J-326	6	Ductile Iron	130	0.0	0.00	0.0000
19501	5	J-23	J-24	16	Ductile Iron	130	0.0	0.00	0.0000
19507	15	J-120	J-121	16	Ductile Iron	130	0.0	-17.00	0.0300
19510	5	J-19	J-20	12	Ductile Iron	130	0.0	0.00	0.0000
19511	5	J-17	J-18	12	Ductile Iron	130	0.0	0.00	0.0000
19512	366	J-19	J-17	16	Ductile Iron	130	0.0	-17.00	0.0300
19514	5	J-15	J-16	12	Ductile Iron	130	0.0	0.00	0.0000
19515	413	J-15	J-298	16	Ductile Iron	130	0.0	-17.00	0.0300
19516	88	J-298	J-185	16	Ductile Iron	130	0.0	-17.00	0.0300
19517	25	J-185	J-186	16	Ductile Iron	130	0.0	-17.00	0.0300
19520	39	J-186	J-231	16	Ductile Iron	130	0.0	-17.00	0.0300
19522	25	J-189	J-190	12	Ductile Iron	130	0.0	-17.00	0.0500
19526	2	J-7	J-8	0.8	Ductile Iron	130	0.0	0.00	0.0000
19527	2	J-5	J-6	0.8	Ductile Iron	130	0.0	0.00	0.0000
21371	649	J-385	J-400	16	Ductile Iron	130	0.0	-13.00	0.0200
21372	659	J-426	J-421	16	Ductile Iron	130	0.0	-40.00	0.0600
21374	349	J-439	J-432	16	Ductile Iron	130	0.0	-116.00	0.1800
21395	53	J-428	J-429	6	Ductile Iron	130	0.0	0.00	0.0000
21709	365	J-435	J-504	16	Ductile Iron	130	0.0	-2.00	0.0000
21710	85	J-496	J-355	16	Ductile Iron	130	0.0	-6.00	0.0100
21711	37	J-367	J-368	6	Ductile Iron	130	0.0	0.00	0.0000
21712	13	J-232	J-233	6	Ductile Iron	130	0.0	0.00	0.0000
21713	16	J-261	J-262	8	Ductile Iron	130	0.0	4.00	0.0200
21714	4	J-4	J-5	6	Ductile Iron	130	0.0	4.00	0.0400
21715	1	J-6	J-7	16	Ductile Iron	130	0.0	0.00	0.0000
21716	6	J-115	J-116	6	Ductile Iron	130	0.0	-119.00	1.3500
21717	1	J-1	J-3	16	Ductile Iron	130	0.0	0.00	0.0000
21718	1	J-1	J-2	16	Ductile Iron	130	0.0	0.00	0.0000
21719	26	J-323	J-324	6	Ductile Iron	130	0.0	0.00	0.0000
21720	20	J-284	J-285	6	Ductile Iron	130	0.0	-16.00	0.1900
21722	53	J-440	J-441	6	Ductile Iron	130	0.0	0.00	0.0000
21723	38	J-369	J-370	6	Ductile Iron	130	0.0	0.00	0.0000
21724	29	J-333	J-334	8	Ductile Iron	130	0.0	12.00	0.0800
24188	60	J-458	J-459	6	Ductile Iron	130	0.0	0.00	0.0000
24513	20	J-294	J-295	8	Ductile Iron	130	0.0	0.00	0.0000
24514	20	J-296	J-297	8	Ductile Iron	130	0.0	-1.00	0.0100
24515	45	J-405	J-411	8	Ductile Iron	130	0.0	-1.00	0.0100
24516	45	J-412	J-413	8	Ductile Iron	130	0.0	-1.00	0.0100
24517	300	J-294	J-312	8	Ductile Iron	130	0.0	0.00	0.0000
24518	303	J-296	J-479	8	Ductile Iron	130	0.0	1.00	0.0100
24519	22	J-311	J-312	6	Ductile Iron	130	0.0	0.00	0.0000
24520	74	J-479	J-480	8	Ductile Iron	130	0.0	1.00	0.0100



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
25253	4	J-56	J-57	6	Ductile Iron	130	0.0	0.00	0.0000
25254	6	J-36	J-37	6	Ductile Iron	130	0.0	-2.00	0.0200
25255	6	J-87	J-88	6	Ductile Iron	130	0.0	0.00	0.0000
25256	5	J-52	J-53	6	Ductile Iron	130	0.0	0.00	0.0000
25257	5	J-65	J-66	6	Ductile Iron	130	0.0	0.00	0.0000
25258	5	J-85	J-86	6	Ductile Iron	130	0.0	0.00	0.0000
25283	7	J-154	J-155	4	Ductile Iron	130	0.0	0.00	0.0000
25284	7	J-152	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
25565	445	J-107	J-13	8	Ductile Iron	130	0.0	-4.00	0.0300
25566	6	J-107	J-108	6	Ductile Iron	130	0.0	0.00	0.0000
25595	7	J-77	J-78	6	Ductile Iron	130	0.0	0.00	0.0000
27024	49	J-254	J-255	16	Ductile Iron	130	0.0	17.00	0.0300
27025	34	J-23	J-222	16	Ductile Iron	130	0.0	0.00	0.0000
27504	117	J-393	J-162	8	Ductile Iron	130	0.0	0.00	0.0000
27505	10	J-162	J-163	6	Ductile Iron	130	0.0	0.00	0.0000
27906	504	J-281	J-505	8	Ductile Iron	130	0.0	-9.00	0.0600
27908	632	J-505	J-402	8	Ductile Iron	130	0.0	-9.00	0.0600
27909	12	J-199	J-200	6	Ductile Iron	130	0.0	0.00	0.0000
28144	138	J-516	J-544	8	Ductile Iron	130	0.0	-10.00	0.0700
29987	75	J-483	J-336	6	Ductile Iron	130	0.0	0.00	0.0000
29988	30	J-336	J-337	6	Ductile Iron	130	0.0	0.00	0.0000
30003	6	J-69	J-70	12	Ductile Iron	130	0.0	0.00	0.0000
30004	115	J-526	J-462	8	Ductile Iron	130	0.0	0.00	0.0000
30005	310	J-583	J-526	16	Ductile Iron	130	0.0	-53.00	0.0800
30006	273	J-537	J-205	16	Ductile Iron	130	0.0	-57.00	0.0900
30007	9	J-195	J-196	6	Ductile Iron	130	0.0	-5.00	0.0600
30009	45	J-409	J-410	6	Ductile Iron	130	0.0	0.00	0.0000
30010	683	J-205	J-643	16	Ductile Iron	130	0.0	-62.00	0.1000
30011	647	J-643	J-22	16	Ductile Iron	130	0.0	-79.00	0.1300
30012	3	J-22	J-23	12	Ductile Iron	130	0.0	10.00	0.0300
30015	640	J-22	J-638	16	Ductile Iron	130	0.0	-89.00	0.1400
30017	3	J-20	J-21	8	Ductile Iron	130	0.0	0.00	0.0000
30021	617	J-635	J-484	16	Ductile Iron	130	0.0	-100.00	0.1600
30023	21	J-292	J-293	6	Ductile Iron	130	0.0	0.00	0.0000
30389	117	J-524	J-531	12	Ductile Iron	130	0.0	38.00	0.1100
30390	19	J-252	J-253	6	Ductile Iron	130	0.0	0.00	0.0000
30392	88	J-499	J-278	12	Ductile Iron	130	0.0	0.00	0.0000
30393	435	J-599	J-607	16	Ductile Iron	130	0.0	-38.00	0.0600
30394	14	J-259	J-260	6	Ductile Iron	130	0.0	0.00	0.0000
30395	8	J-173	J-174	6	Ductile Iron	130	0.0	0.00	0.0000
30397	358	J-598	J-509	16	Ductile Iron	130	0.0	-38.00	0.0600
30398	98	J-509	J-510	6	Ductile Iron	130	0.0	0.00	0.0000

WATERLINE TANKSERLEY REPLACEMENT
Future Average Day Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30399	398	J-509	J-346	16	Ductile Iron	130	0.0	-38.00	0.0600
30400	105	J-346	J-518	16	Ductile Iron	130	0.0	-52.00	0.0800
30401	102	J-513	J-514	6	Ductile Iron	130	0.0	0.00	0.0000
40954	162	J-407	J-552	8	Ductile Iron	130	0.0	1.00	0.0100
40955	166	J-511	J-412	8	Ductile Iron	130	0.0	-1.00	0.0100
40956	54	J-407	J-408	6	Ductile Iron	130	0.0	0.00	0.0000
40957	6	J-117	J-118	6	Ductile Iron	130	0.0	0.00	0.0000
40958	19	J-286	J-287	6	Ductile Iron	130	0.0	0.00	0.0000
44165	278	J-79	J-28	12	Ductile Iron	130	0.0	15.00	0.0400
44167	5	J-79	J-80	6	Ductile Iron	130	0.0	0.00	0.0000
44168	5	J-75	J-76	6	Ductile Iron	130	0.0	0.00	0.0000
44169	8	J-35	J-170	6	Ductile Iron	130	0.0	0.00	0.0000
45230	35	J-190	J-223	12	Ductile Iron	130	0.0	-17.00	0.0500
45231	13	J-106	J-107	1	Ductile Iron	130	0.0	0.00	0.0000
45232	8	J-67	J-68	6	Ductile Iron	130	0.0	0.00	0.0000
45234	8	J-69	J-70	6	Ductile Iron	130	0.0	0.00	0.0000
45236	22	J-165	J-166	12	Ductile Iron	130	0.0	-17.00	0.0500
45237	293	J-166	J-363	12	Ductile Iron	130	0.0	-17.00	0.0500
45238	10	J-81	J-82	6	Ductile Iron	130	0.0	0.00	0.0000
45239	8	J-73	J-74	6	Ductile Iron	130	0.0	0.00	0.0000
45241	22	J-168	J-169	12	Ductile Iron	130	0.0	-17.00	0.0500
45242	148	J-169	J-296	12	Ductile Iron	130	0.0	-17.00	0.0500
45245	10	J-77	J-78	6	Ductile Iron	130	0.0	0.00	0.0000
45247	89	J-301	J-302	6	Ductile Iron	130	0.0	0.00	0.0000
45248	106	J-321	J-246	8	Ductile Iron	130	0.0	19.00	0.1200
45249	8	J-71	J-72	6	Ductile Iron	130	0.0	0.00	0.0000
45251	13	J-101	J-102	1	Ductile Iron	130	0.0	0.00	0.0000
45252	85	J-297	J-163	12	Ductile Iron	130	0.0	-36.00	0.1000
45253	22	J-163	J-164	12	Ductile Iron	130	0.0	-36.00	0.1000
45257	8	J-63	J-64	6	Ductile Iron	130	0.0	0.00	0.0000
45260	5	J-21	J-22	1	Ductile Iron	130	0.0	0.00	0.0000
45261	107	J-324	J-602	8	Ductile Iron	130	0.0	0.00	0.0000
45262	8	J-65	J-66	6	Ductile Iron	130	0.0	0.00	0.0000
45263	277	J-65	J-167	12	Ductile Iron	130	0.0	-36.00	0.1000
45264	22	J-167	J-579	12	Ductile Iron	130	0.0	-36.00	0.1000
45268	9	J-183	J-184	6	Ductile Iron	130	0.0	0.00	0.0000
45271	5	J-73	J-74	1	Ductile Iron	130	0.0	0.00	0.0000
45410	41	J-377	J-378	8	Ductile Iron	130	0.0	0.00	0.0000
45970	15	J-264	J-265	6	Ductile Iron	130	0.0	0.00	0.0000
45972	7	J-136	J-137	6	Ductile Iron	130	0.0	0.00	0.0000
45973	37	J-365	J-366	6	Ductile Iron	130	0.0	0.00	0.0000
45975	38	J-373	J-374	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
45998	55	J-61	J-266	8	Ductile Iron	130	0.0	0.00	0.0000
45999	7	J-61	J-62	8	Ductile Iron	130	0.0	0.00	0.0000
47269	114	J-512	J-227	8	Ductile Iron	130	0.0	19.00	0.1200
47271	9	J-144	J-145	6	Ductile Iron	130	0.0	0.00	0.0000
47272	140	J-144	J-181	8	Ductile Iron	130	0.0	19.00	0.1200
47273	9	J-181	J-182	8	Ductile Iron	130	0.0	0.00	0.0000
47274	60	J-181	J-460	8	Ductile Iron	130	0.0	0.00	0.0000
47275	37	J-371	J-372	6	Ductile Iron	130	0.0	0.00	0.0000
47276	93	J-371	J-500	8	Ductile Iron	130	0.0	8.00	0.0500
47278	41	J-389	J-390	8	Ductile Iron	130	0.0	0.00	0.0000
47279	672	J-389	J-547	8	Ductile Iron	130	0.0	7.00	0.0400
47305	50	J-355	J-430	8	Ductile Iron	130	0.0	2.00	0.0100
47310	52	J-435	J-40	8	Ductile Iron	130	0.0	0.00	0.0000
47311	4	J-40	J-41	6	Ductile Iron	130	0.0	0.00	0.0000
47325	96	J-398	J-504	8	Ductile Iron	130	0.0	0.00	0.0000
47327	42	J-398	J-399	6	Ductile Iron	130	0.0	0.00	0.0000
48023	23	J-177	J-178	6	Ductile Iron	130	0.0	0.00	0.0000
48024	140	J-343	J-150	8	Ductile Iron	130	0.0	1.00	0.0000
48025	20	J-150	J-151	8	Ductile Iron	130	0.0	1.00	0.0000
48027	2	J-9	J-10	8	Ductile Iron	130	0.0	0.00	0.0000
48028	16	J-125	J-126	6	Ductile Iron	130	0.0	0.00	0.0000
48211	7	J-138	J-139	6	Ductile Iron	130	0.0	0.00	0.0000
48212	7	J-140	J-141	6	Ductile Iron	130	0.0	0.00	0.0000
48213	20	J-305	J-306	8	Ductile Iron	130	0.0	0.00	0.0000
55557	98	J-276	J-277	12	Ductile Iron	130	0.0	4.00	0.0100
55562	20	J-152	J-153	8	Ductile Iron	130	0.0	0.00	0.0000
55563	19	J-142	J-143	6	Ductile Iron	130	0.0	0.00	0.0000
55564	50	J-260	J-194	8	Ductile Iron	130	0.0	0.00	0.0000
55565	18	J-137	J-138	8	Ductile Iron	130	0.0	0.00	0.0000
55569	26	J-204	J-132	8	Ductile Iron	130	0.0	0.00	0.0000
55570	17	J-131	J-132	8	Ductile Iron	130	0.0	0.00	0.0000
55571	28	J-209	J-210	6	Ductile Iron	130	0.0	0.00	0.0000
55572	26	J-202	J-203	8	Ductile Iron	130	0.0	0.00	0.0000
55574	55	J-597	J-268	8	Ductile Iron	130	0.0	0.00	0.0000
55575	26	J-195	J-196	8	Ductile Iron	130	0.0	0.00	0.0000
55577	9	J-55	J-56	6	Ductile Iron	130	0.0	0.00	0.0000
55578	8	J-49	J-50	6	Ductile Iron	130	0.0	0.00	0.0000
55979	260	J-448	J-450	12	Ductile Iron	130	0.0	6.00	0.0200
55980	56	J-450	J-451	8	Ductile Iron	130	0.0	0.00	0.0000
55981	56	J-448	J-449	8	Ductile Iron	130	0.0	0.00	0.0000
55982	8	J-134	J-135	6	Ductile Iron	130	0.0	0.00	0.0000
55983	258	J-543	J-453	12	Ductile Iron	130	0.0	-4.00	0.0100



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
55984	58	J-453	J-454	8	Ductile Iron	130	0.0	0.00	0.0000
55985	10	J-160	J-161	99	Ductile Iron	130	0.0	0.00	0.0000
55986	196	J-146	J-557	12	Ductile Iron	130	0.0	-4.00	0.0100
55987	9	J-146	J-147	6	Ductile Iron	130	0.0	0.00	0.0000
55988	63	J-469	J-470	8	Ductile Iron	130	0.0	0.00	0.0000
55989	352	J-597	J-315	12	Ductile Iron	130	0.0	4.00	0.0100
55990	63	J-315	J-466	8	Ductile Iron	130	0.0	0.00	0.0000
55991	10	J-150	J-151	6	Ductile Iron	130	0.0	0.00	0.0000
55992	69	J-276	J-375	12	Ductile Iron	130	0.0	0.00	0.0000
55993	16	J-276	J-277	16	Ductile Iron	130	0.0	6.00	0.0100
55994	510	J-276	J-623	16	Ductile Iron	130	0.0	-12.00	0.0200
56000	304	J-239	J-272	16	Ductile Iron	130	0.0	-12.00	0.0200
56001	67	J-272	J-232	12	Ductile Iron	130	0.0	0.00	0.0000
56003	332	J-235	J-255	16	Ductile Iron	130	0.0	-17.00	0.0300
56010	9	J-51	J-52	6	Ductile Iron	130	0.0	0.00	0.0000
56014	9	J-53	J-54	6	Ductile Iron	130	0.0	0.00	0.0000
56016	30	J-212	J-213	8	Ductile Iron	130	0.0	0.00	0.0000
56018	32	J-214	J-215	8	Ductile Iron	130	0.0	0.00	0.0000
56021	6	J-13	J-14	6	Ductile Iron	130	0.0	0.00	0.0000
56023	8	J-43	J-44	6	Ductile Iron	130	0.0	0.00	0.0000
56024	23	J-171	J-172	8	Ductile Iron	130	0.0	1.00	0.0000
56025	21	J-157	J-154	8	Ductile Iron	130	0.0	0.00	0.0000
56028	8	J-47	J-48	6	Ductile Iron	130	0.0	0.00	0.0000
60881	220	J-498	J-562	8	Ductile Iron	130	0.0	-5.00	0.0300
60885	31	J-340	J-341	6	Ductile Iron	130	0.0	0.00	0.0000
64961	16	J-271	J-272	6	Ductile Iron	130	0.0	0.00	0.0000
64963	6	J-123	J-124	99	Ductile Iron	130	0.0	-170.00	0.0100
75508	481	J-262	J-613	8	Ductile Iron	130	0.0	2.00	0.0100
76924	6	J-125	J-126	6	Ductile Iron	130	0.0	0.00	0.0000
76925	34	J-356	J-357	6	Ductile Iron	130	0.0	2.00	0.0200
89634	50	J-431	J-432	6	Ductile Iron	130	0.0	0.00	0.0000
89638	55	J-298	J-444	16	Ductile Iron	130	0.0	6.00	0.0100
89640	53	J-442	J-443	8	Ductile Iron	130	0.0	-4.00	0.0300
89641	13	J-242	J-243	6	Ductile Iron	130	0.0	0.00	0.0000
89642	14	J-256	J-240	6	Ductile Iron	130	0.0	0.00	0.0000
89643	14	J-254	J-255	6	Ductile Iron	130	0.0	0.00	0.0000
89644	32	J-349	J-350	16	Ductile Iron	130	0.0	-8.00	0.0100
89646	9	J-187	J-188	16	Ductile Iron	130	0.0	8.00	0.0100
90048	53	J-438	J-439	10	Ductile Iron	130	0.0	-32.00	0.1300
96761	14	J-185	J-257	10	Ductile Iron	130	0.0	0.00	0.0000
96762	9	J-185	J-186	10	Ductile Iron	130	0.0	0.00	0.0000
98803	117	J-532	J-485	12	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
98804	1475	J-532	J-667	12	Ductile Iron	130	0.0	0.00	0.0000
98805	315	J-667	J-366	12	Ductile Iron	130	0.0	0.00	0.0000
98806	944	J-366	J-627	12	Ductile Iron	130	0.0	0.00	0.0000
98807	584	J-627	J-628	12	Ductile Iron	130	0.0	0.00	0.0000
99201	13	J-186	J-239	12	Ductile Iron	130	0.0	0.00	0.0000
99202	504	J-620	J-236	24	Ductile Iron	130	0.0	0.00	0.0000
99203	26	J-239	J-236	12	Ductile Iron	130	0.0	0.00	0.0000
99204	21	J-156	J-620	12	Ductile Iron	130	0.0	0.00	0.0000
99205	19	J-235	J-236	1	Ductile Iron	130	0.0	0.00	0.0000
105743	8	J-132	J-133	6	Ductile Iron	130	0.0	0.00	0.0000
105756	9	J-142	J-143	6	Ductile Iron	130	0.0	0.00	0.0000
105757	21	J-64	J-307	12	Ductile Iron	130	0.0	0.00	0.0000
105758	123	J-307	J-537	12	Ductile Iron	130	0.0	0.00	0.0000
105759	17	J-280	J-63	12	Ductile Iron	130	0.0	0.00	0.0000
105760	5	J-63	J-64	12	Ductile Iron	130	0.0	0.00	0.0000
105761	19	J-290	J-291	8	Ductile Iron	130	0.0	-1.00	0.0100
105762	61	J-462	J-463	8	Ductile Iron	130	0.0	0.00	0.0000
105763	198	J-463	J-535	8	Ductile Iron	130	0.0	0.00	0.0000
105765	120	J-535	J-164	8	Ductile Iron	130	0.0	0.00	0.0000
105766	8	J-164	J-165	6	Ductile Iron	130	0.0	0.00	0.0000
105767	349	J-164	J-596	8	Ductile Iron	130	0.0	0.00	0.0000
141981	27	J-330	J-290	8	Ductile Iron	130	0.0	-1.00	0.0100
141982	121	J-330	J-536	8	Ductile Iron	130	0.0	1.00	0.0100
141984	44	J-403	J-404	6	Ductile Iron	130	0.0	0.00	0.0000
141985	6	J-97	J-98	6	Ductile Iron	130	0.0	5.00	0.0600
141986	6	J-95	J-96	6	Ductile Iron	130	0.0	0.00	0.0000
141987	138	J-472	J-99	8	Ductile Iron	130	0.0	0.00	0.0000
141988	11	J-217	J-218	6	Ductile Iron	130	0.0	0.00	0.0100
141989	6	J-99	J-100	6	Ductile Iron	130	0.0	0.00	0.0000
141990	227	J-498	J-467	6	Ductile Iron	130	0.0	1.00	0.0200
141991	63	J-467	J-468	6	Ductile Iron	130	0.0	0.00	0.0100
141994	5	J-83	J-84	6	Ductile Iron	130	0.0	0.00	0.0000
141995	6	J-101	J-102	6	Ductile Iron	130	0.0	0.00	0.0000
144879	5	J-67	J-68	16	Ductile Iron	130	0.0	0.00	0.0000
158638	6	J-33	J-34	6	Ductile Iron	130	0.0	0.00	0.0000
158639	43	J-244	J-245	6	Ductile Iron	130	0.0	0.00	0.0000
158640	35	J-224	J-225	8	Ductile Iron	130	0.0	1.00	0.0000
158649	26	J-193	J-194	8	Ductile Iron	130	0.0	0.00	0.0000
158650	65	J-140	J-193	8	Ductile Iron	130	0.0	0.00	0.0000
158651	18	J-139	J-140	8	Ductile Iron	130	0.0	0.00	0.0000
158652	20	J-154	J-155	8	Ductile Iron	130	0.0	0.00	0.0000
158653	25	J-191	J-192	6	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
158654	148	J-155	J-200	8	Ductile Iron	130	0.0	0.00	0.0000
158655	26	J-200	J-201	8	Ductile Iron	130	0.0	0.00	0.0000
159024	35	J-226	J-227	8	Ductile Iron	130	0.0	1.00	0.0000
159026	11	J-85	J-86	6	Ductile Iron	130	0.0	0.00	0.0000
174392	80	J-491	J-492	8	Ductile Iron	130	0.0	0.00	0.0000
174802	41	J-395	J-396	4	Ductile Iron	130	0.0	0.00	0.0000
174803	27	J-155	J-327	4	Ductile Iron	130	0.0	0.00	0.0000
189468	7	J-148	J-149	6	Ductile Iron	130	0.0	0.00	0.0000
189469	131	J-279	J-130	12	Ductile Iron	130	0.0	0.00	0.0000
189470	6	J-130	J-131	12	Ductile Iron	130	0.0	0.00	0.0000
189472	197	J-559	J-437	12	Ductile Iron	130	0.0	-2.00	0.0100
189473	16	J-273	J-274	6	Ductile Iron	130	0.0	0.00	0.0000
189474	53	J-437	J-361	12	Ductile Iron	130	0.0	-2.00	0.0100
189475	36	J-361	J-362	12	Ductile Iron	130	0.0	-2.00	0.0100
189476	197	J-362	J-558	12	Ductile Iron	130	0.0	-4.00	0.0100
189477	6	J-91	J-92	4	Ductile Iron	130	0.0	0.00	0.0000
198398	147	J-417	J-286	8	Ductile Iron	130	0.0	1.00	0.0000
203870	6	J-2	J-19	16	Ductile Iron	130	0.0	-17.00	0.0300
203871	1	J-1	J-2	8	Ductile Iron	130	0.0	0.00	0.0000
213052	70	J-475	J-219	8	Ductile Iron	130	0.0	2.00	0.0200
213053	11	J-219	J-220	6	Ductile Iron	130	0.0	0.00	0.0000
213054	388	J-219	J-418	8	Ductile Iron	130	0.0	2.00	0.0100
213055	47	J-418	J-419	8	Ductile Iron	130	0.0	0.00	0.0000
225318	10	J-196	J-205	6	Ductile Iron	130	0.0	-5.00	0.0600
228582	4	J-34	J-35	8	Ductile Iron	130	0.0	2.00	0.0100
228583	329	J-594	J-34	8	Ductile Iron	130	0.0	2.00	0.0100
229343	12	J-12	J-234	12	Ductile Iron	130	0.0	10.00	0.0300
229344	4	J-28	J-29	8	Ductile Iron	130	0.0	15.00	0.1000
229345	6	J-29	J-10	8	Ductile Iron	130	0.0	15.00	0.1000
229346	2	J-10	J-11	12	Ductile Iron	130	0.0	10.00	0.0300
229347	2	J-11	J-12	12	Ductile Iron	130	0.0	10.00	0.0300
239091	40	J-232	J-233	12	Ductile Iron	130	0.0	0.00	0.0000
239094	15	J-243	J-263	6	Ductile Iron	130	0.0	0.00	0.0000
239098	13	J-240	J-241	6	Ductile Iron	130	0.0	0.00	0.0000
239099	20	J-255	J-299	6	Ductile Iron	130	0.0	0.00	0.0000
239483	168	J-552	J-117	8	Ductile Iron	130	0.0	1.00	0.0100
239484	116	J-471	J-511	8	Ductile Iron	130	0.0	-1.00	0.0100
239485	44	J-405	J-406	8	Ductile Iron	130	0.0	1.00	0.0100
239487	158	J-536	J-404	8	Ductile Iron	130	0.0	1.00	0.0100
239884	557	J-573	J-617	8	Ductile Iron	130	0.0	-16.00	0.1000
239886	455	J-610	J-394	8	Ductile Iron	130	0.0	-17.00	0.1100
239888	37	J-363	J-364	12	Ductile Iron	130	0.0	-24.00	0.0700

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
240694	84	J-406	J-407	8	Ductile Iron	130	0.0	1.00	0.0100
240695	46	J-117	J-417	8	Ductile Iron	130	0.0	1.00	0.0000
240696	69	J-286	J-471	8	Ductile Iron	130	0.0	-1.00	0.0100
240697	441	J-483	J-107	8	Ductile Iron	130	0.0	-1.00	0.0000
240700	70	J-472	J-473	8	Ductile Iron	130	0.0	-4.00	0.0200
240701	101	J-99	J-217	8	Ductile Iron	130	0.0	0.00	0.0000
240702	199	J-526	J-475	16	Ductile Iron	130	0.0	-53.00	0.0800
240703	164	J-475	J-537	16	Ductile Iron	130	0.0	-55.00	0.0900
241094	155	J-547	J-477	8	Ductile Iron	130	0.0	6.00	0.0400
241095	254	J-572	J-79	12	Ductile Iron	130	0.0	18.00	0.0500
241097	229	J-565	J-106	8	Ductile Iron	130	0.0	-2.00	0.0200
241098	453	J-167	J-609	8	Ductile Iron	130	0.0	-7.00	0.0400
241101	204	J-560	J-204	8	Ductile Iron	130	0.0	-1.00	0.0100
241104	61	J-461	J-371	8	Ductile Iron	130	0.0	8.00	0.0500
241105	54	J-371	J-436	8	Ductile Iron	130	0.0	0.00	0.0000
241106	102	J-181	J-461	8	Ductile Iron	130	0.0	19.00	0.1200
241109	49	J-227	J-144	8	Ductile Iron	130	0.0	19.00	0.1200
241111	44	J-246	J-247	8	Ductile Iron	130	0.0	19.00	0.1200
241115	849	J-52	J-88	8	Ductile Iron	130	0.0	5.00	0.0300
241117	572	J-632	J-633	8	Ductile Iron	130	0.0	7.00	0.0400
241118	579	J-632	J-213	8	Ductile Iron	130	0.0	-10.00	0.0600
241121	22	J-314	J-315	8	Ductile Iron	130	0.0	0.00	0.0000
241122	226	J-557	J-469	12	Ductile Iron	130	0.0	-4.00	0.0100
241123	116	J-453	J-146	12	Ductile Iron	130	0.0	-4.00	0.0100
241127	443	J-444	J-608	16	Ductile Iron	130	0.0	6.00	0.0100
241128	303	J-78	J-442	8	Ductile Iron	130	0.0	-4.00	0.0300
241131	268	J-193	J-580	16	Ductile Iron	130	0.0	-8.00	0.0100
241136	592	J-585	J-27	8	Ductile Iron	130	0.0	0.00	0.0000
241137	269	J-446	J-385	16	Ductile Iron	130	0.0	-8.00	0.0100
241139	125	J-533	J-534	6	Ductile Iron	130	0.0	-1.00	0.0100
241142	45	J-400	J-416	16	Ductile Iron	130	0.0	-26.00	0.0400
241145	265	J-519	J-333	16	Ductile Iron	130	0.0	-55.00	0.0900
241146	323	J-370	J-397	16	Ductile Iron	130	0.0	-68.00	0.1100
241147	42	J-397	J-285	16	Ductile Iron	130	0.0	-68.00	0.1100
241148	465	J-285	J-439	16	Ductile Iron	130	0.0	-84.00	0.1300
241494	292	J-432	J-546	16	Ductile Iron	130	0.0	-116.00	0.1800
241495	150	J-546	J-323	16	Ductile Iron	130	0.0	-116.00	0.1800
241496	69	J-323	J-1	16	Ductile Iron	130	0.0	-116.00	0.1800
241497	32	J-1	J-346	16	Ductile Iron	130	0.0	-116.00	0.1800
241498	99	J-346	J-414	16	Ductile Iron	130	0.0	-102.00	0.1600
241499	45	J-414	J-415	16	Ductile Iron	130	0.0	-102.00	0.1600
241500	94	J-501	J-502	6	Ductile Iron	130	0.0	-5.00	0.0600



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
241502	487	J-501	J-614	6	Ductile Iron	130	0.0	8.00	0.0900
242703	326	J-592	J-593	6	Ductile Iron	130	0.0	-4.00	0.0400
243096	18	J-281	J-16	16	Ductile Iron	130	0.0	1.00	0.0000
243097	33	J-355	J-281	16	Ductile Iron	130	0.0	-8.00	0.0100
243100	127	J-504	J-233	16	Ductile Iron	130	0.0	-2.00	0.0000
243101	392	J-506	J-562	16	Ductile Iron	130	0.0	17.00	0.0300
243898	52	J-434	J-38	8	Ductile Iron	130	0.0	0.00	0.0000
243899	4	J-38	J-39	6	Ductile Iron	130	0.0	0.00	0.0000
243900	60	J-457	J-42	8	Ductile Iron	130	0.0	0.00	0.0000
243901	4	J-42	J-43	6	Ductile Iron	130	0.0	0.00	0.0000
247576	10	J-13	J-214	8	Ductile Iron	130	0.0	-6.00	0.0400
247577	2	J-13	J-14	6	Ductile Iron	130	0.0	0.00	0.0000
247937	3	J-14	J-19	6	Ductile Iron	130	0.0	0.00	0.0000
P-1	205	J-643	J-380	8	Ductile Iron	130	0.0	17.00	0.1100
P-2	520	J-380	J-381	8	Ductile Iron	130	0.0	7.00	0.0400
P-3	283	J-381	J-382	8	Ductile Iron	130	0.0	5.00	0.0300
P-4	531	J-382	J-383	8	Ductile Iron	130	0.0	2.00	0.0100
P-5	423	J-383	J-384	8	Ductile Iron	130	0.0	-3.00	0.0200
P-6	283	J-384	J-385	8	Ductile Iron	130	0.0	-5.00	0.0300
P-7	434	J-385	J-380	8	Ductile Iron	130	0.0	-7.00	0.0400
P-10	155	J-383	J-386	8	Ductile Iron	130	0.0	2.00	0.0100
P-11	501	J-593	J-387	6	Ductile Iron	130	0.0	-4.00	0.0400
P-12	462	J-387	J-441	6	Ductile Iron	130	0.0	-5.00	0.0600
P-15	655	J-363	J-389	8	Ductile Iron	130	0.0	7.00	0.0500
P-16	635	J-389	J-588	8	Ductile Iron	130	0.0	5.00	0.0300
P-31	31	R-2	PMP-2	99	Ductile Iron	130	0.0	119.00	0.0000
P-32	42	PMP-2	J-116	99	Ductile Iron	130	0.0	119.00	0.0000
P-34	72	R-3	PMP-3	99	Ductile Iron	130	0.0	0.00	0.0000
P-35	80	PMP-3	J-161	99	Ductile Iron	130	0.0	0.00	0.0000
P-36	26	R-1	PMP-1	99	Ductile Iron	130	0.0	170.00	0.0100
P-37	25	PMP-1	J-124	99	Ductile Iron	130	0.0	170.00	0.0100
P-38	45	J-350	J-401	16	Ductile Iron	130	0.0	-8.00	0.0100
P-39	18	J-401	J-188	16	Ductile Iron	130	0.0	-8.00	0.0100
P-41	336	J-401	J-673	6	Ductile Iron	130	0.0	0.00	0.0000
P-44	1	J-321	J-365	12	Ductile Iron	130	0.0	-26.00	0.0800
P-47	379	J-237	J-235	16	Ductile Iron	130	0.0	-17.00	0.0300
P-49	182	J-250	J-237	16	Ductile Iron	130	0.0	-17.00	0.0300
P-50	242	J-272	J-229	16	Ductile Iron	130	0.0	-17.00	0.0300
P-51	133	J-229	J-250	16	Ductile Iron	130	0.0	-17.00	0.0300
P-53	186	J-242	J-239	16	Ductile Iron	130	0.0	-12.00	0.0200
P-54	200	J-623	J-129	16	Ductile Iron	130	0.0	-12.00	0.0200
P-55	115	J-129	J-242	16	Ductile Iron	130	0.0	-12.00	0.0200

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-56	138	J-15	J-332	16	Ductile Iron	130	0.0	17.00	0.0300
P-58	5	J-332	J-284	16	Ductile Iron	130	0.0	17.00	0.0300
P-59	290	J-284	J-17	16	Ductile Iron	130	0.0	17.00	0.0300
P-62	5	J-287	J-336	16	Ductile Iron	130	0.0	-17.00	0.0300
P-63	658	J-336	J-2	16	Ductile Iron	130	0.0	-17.00	0.0300
P-65	11	J-365	J-370	16	Ductile Iron	130	0.0	-68.00	0.1100
P-74	54	J-326	J-430	6	Ductile Iron	130	0.0	1.00	0.0100
P-75	644	J-430	J-367	6	Ductile Iron	130	0.0	3.00	0.0300
P-78	4	J-15	J-94	16	Ductile Iron	130	0.0	0.00	0.0000
P-85	17	J-378	J-325	12	Ductile Iron	130	0.0	-36.00	0.1000
P-87	1	J-321	J-365	8	Ductile Iron	130	0.0	-9.00	0.0600
P-90	70	J-296	J-322	12	Ductile Iron	130	0.0	-17.00	0.0500
P-92	187	J-164	J-293	12	Ductile Iron	130	0.0	-36.00	0.1000
P-93	49	J-293	J-378	12	Ductile Iron	130	0.0	-36.00	0.1000
P-96	512	J-626	J-321	30	Ductile Iron	130	0.0	87.00	0.0400
P-97	39	J-321	J-67	30	Ductile Iron	130	0.0	100.00	0.0500
P-98	18	J-484	J-292	16	Ductile Iron	130	0.0	-100.00	0.1600
P-99	62	J-292	J-382	16	Ductile Iron	130	0.0	-100.00	0.1600
P-106	503	J-447	J-630	8	Ductile Iron	130	0.0	11.00	0.0700
P-107	30	J-630	J-625	8	Ductile Iron	130	0.0	8.00	0.0500
P-108	12	J-185	J-628	8	Ductile Iron	130	0.0	0.00	0.0000
P-109	3	J-628	J-266	8	Ductile Iron	130	0.0	0.00	0.0000
P-110	11	J-605	J-138	8	Ductile Iron	130	0.0	1.00	0.0100
P-111	409	J-138	J-606	8	Ductile Iron	130	0.0	1.00	0.0100
P-112	641	J-65	J-590	8	Ductile Iron	130	0.0	11.00	0.0700
P-113	297	J-590	J-52	8	Ductile Iron	130	0.0	8.00	0.0500
P-115	24	J-372	J-312	8	Ductile Iron	130	0.0	0.00	0.0000
P-117	6	J-343	J-340	8	Ductile Iron	130	0.0	0.00	0.0000
P-121	46	J-291	J-583	16	Ductile Iron	130	0.0	-53.00	0.0800
P-123	26	J-568	J-581	16	Ductile Iron	130	0.0	12.00	0.0200
P-124	206	J-638	J-578	16	Ductile Iron	130	0.0	-89.00	0.1400
P-125	433	J-578	J-20	16	Ductile Iron	130	0.0	-94.00	0.1500
P-126	56	J-476	J-572	8	Ductile Iron	130	0.0	13.00	0.0800
P-127	14	J-572	J-477	6	Ductile Iron	130	0.0	-6.00	0.0600
P-128	5	J-322	J-355	12	Ductile Iron	130	0.0	-17.00	0.0500
P-130	237	J-416	J-391	16	Ductile Iron	130	0.0	-26.00	0.0400
P-131	10	J-391	J-571	16	Ductile Iron	130	0.0	-26.00	0.0400
P-133	45	J-324	J-65	12	Ductile Iron	130	0.0	-36.00	0.1000
P-134	561	J-562	J-6	16	Ductile Iron	130	0.0	12.00	0.0200
P-135	4	J-6	J-568	16	Ductile Iron	130	0.0	12.00	0.0200
P-146	662	J-616	J-37	8	Ductile Iron	130	0.0	-5.00	0.0300
P-147	104	J-37	J-651	8	Ductile Iron	130	0.0	-7.00	0.0400



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-148	17	J-393	J-339	8	Ductile Iron	130	0.0	17.00	0.1100
P-149	24	J-339	J-394	8	Ductile Iron	130	0.0	17.00	0.1100
P-150	73	J-633	J-190	8	Ductile Iron	130	0.0	5.00	0.0300
P-151	617	J-190	J-648	8	Ductile Iron	130	0.0	3.00	0.0200
P-152	52	J-32	J-195	6	Ductile Iron	130	0.0	-5.00	0.0600
P-154	92	J-205	J-409	8	Ductile Iron	130	0.0	0.00	0.0000
P-155	23	J-409	J-528	8	Ductile Iron	130	0.0	0.00	0.0000
P-156	720	J-649	J-143	12	Ductile Iron	130	0.0	0.00	0.0000
P-157	2	J-143	J-280	12	Ductile Iron	130	0.0	0.00	0.0000
P-158	545	J-629	J-306	8	Ductile Iron	130	0.0	-2.00	0.0100
P-159	18	J-306	J-630	6	Ductile Iron	130	0.0	-2.00	0.0200
P-163	287	J-395	J-661	30	Ductile Iron	130	0.0	87.00	0.0400
P-164	82	J-619	J-254	16	Ductile Iron	130	0.0	-8.00	0.0100
P-165	465	J-254	J-349	16	Ductile Iron	130	0.0	-8.00	0.0100
P-166	207	J-617	J-216	8	Ductile Iron	130	0.0	-17.00	0.1100
P-167	293	J-216	J-618	8	Ductile Iron	130	0.0	-17.00	0.1100
P-170	6	J-291	J-21	12	Ductile Iron	130	0.0	-36.00	0.1000
P-171	61	J-21	J-324	12	Ductile Iron	130	0.0	-36.00	0.1000
P-172	281	J-524	J-252	16	Ductile Iron	130	0.0	-38.00	0.0600
P-173	90	J-252	J-599	16	Ductile Iron	130	0.0	-38.00	0.0600
P-175	137	J-173	J-598	16	Ductile Iron	130	0.0	-38.00	0.0600
P-176	44	J-597	J-49	12	Ductile Iron	130	0.0	-3.00	0.0100
P-180	264	J-132	J-195	12	Ductile Iron	130	0.0	1.00	0.0000
P-181	72	J-195	J-597	12	Ductile Iron	130	0.0	1.00	0.0000
P-184	177	J-10	J-75	8	Ductile Iron	130	0.0	5.00	0.0300
P-185	159	J-75	J-594	8	Ductile Iron	130	0.0	2.00	0.0100
P-186	47	J-334	J-377	8	Ductile Iron	130	0.0	12.00	0.0800
P-187	8	J-377	J-447	8	Ductile Iron	130	0.0	12.00	0.0800
P-188	16	J-422	J-85	8	Ductile Iron	130	0.0	16.00	0.1000
P-189	733	J-85	J-65	8	Ductile Iron	130	0.0	14.00	0.0900
P-192	208	J-277	J-212	12	Ductile Iron	130	0.0	1.00	0.0000
P-194	136	J-172	J-177	8	Ductile Iron	130	0.0	1.00	0.0000
P-195	25	J-177	J-343	8	Ductile Iron	130	0.0	1.00	0.0000
P-198	42	J-582	J-356	8	Ductile Iron	130	0.0	11.00	0.0700
P-199	270	J-356	J-389	8	Ductile Iron	130	0.0	9.00	0.0600
P-200	111	J-579	J-491	12	Ductile Iron	130	0.0	-36.00	0.1000
P-201	157	J-491	J-487	12	Ductile Iron	130	0.0	-36.00	0.1000
P-202	434	J-129	J-198	8	Ductile Iron	130	0.0	-4.00	0.0300
P-203	19	J-198	J-561	8	Ductile Iron	130	0.0	-4.00	0.0300
P-204	99	J-606	J-141	8	Ductile Iron	130	0.0	0.00	0.0000
P-205	334	J-141	J-547	8	Ductile Iron	130	0.0	0.00	0.0000
P-206	433	J-608	J-443	16	Ductile Iron	130	0.0	-4.00	0.0100

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-207	44	J-443	J-563	16	Ductile Iron	130	0.0	-8.00	0.0100
P-210	56	J-498	J-340	8	Ductile Iron	130	0.0	4.00	0.0200
P-211	30	J-340	J-473	8	Ductile Iron	130	0.0	4.00	0.0200
P-212	7	J-468	J-101	6	Ductile Iron	130	0.0	0.00	0.0100
P-213	84	J-101	J-345	6	Ductile Iron	130	0.0	0.00	0.0100
P-214	16	J-218	J-83	6	Ductile Iron	130	0.0	0.00	0.0100
P-215	16	J-83	J-345	6	Ductile Iron	130	0.0	0.00	0.0100
P-216	25	J-404	J-97	8	Ductile Iron	130	0.0	1.00	0.0100
P-218	32	J-97	J-95	8	Ductile Iron	130	0.0	-4.00	0.0300
P-219	117	J-95	J-472	8	Ductile Iron	130	0.0	-4.00	0.0300
P-220	18	J-415	J-115	16	Ductile Iron	130	0.0	-102.00	0.1600
P-221	79	J-115	J-506	16	Ductile Iron	130	0.0	17.00	0.0300
P-222	125	J-450	J-160	12	Ductile Iron	130	0.0	-4.00	0.0100
P-223	13	J-160	J-543	12	Ductile Iron	130	0.0	-4.00	0.0100
P-224	10	J-383	J-123	8	Ductile Iron	130	0.0	-169.00	1.0800
P-225	30	J-123	J-384	8	Ductile Iron	130	0.0	1.00	0.0100
P-226	34	J-212	J-331	12	Ductile Iron	130	0.0	1.00	0.0000
P-228	176	J-331	J-214	12	Ductile Iron	130	0.0	1.00	0.0000
P-230	85	J-214	J-13	12	Ductile Iron	130	0.0	1.00	0.0000
P-231	168	J-13	J-375	12	Ductile Iron	130	0.0	1.00	0.0000
P-235	55	J-301	J-321	12	Ductile Iron	130	0.0	-17.00	0.0500
P-236	562	J-49	J-55	12	Ductile Iron	130	0.0	-3.00	0.0100
P-237	37	J-55	J-277	12	Ductile Iron	130	0.0	-3.00	0.0100
P-240	321	J-282	J-53	12	Ductile Iron	130	0.0	4.00	0.0100
P-241	454	J-53	J-276	12	Ductile Iron	130	0.0	4.00	0.0100
P-243	35	J-81	J-165	12	Ductile Iron	130	0.0	-17.00	0.0500
P-245	153	J-69	J-349	12	Ductile Iron	130	0.0	-17.00	0.0500
P-246	80	J-349	J-370	12	Ductile Iron	130	0.0	-17.00	0.0500
P-247	91	J-370	J-81	12	Ductile Iron	130	0.0	-17.00	0.0500
P-252	80	J-326	J-61	8	Ductile Iron	130	0.0	19.00	0.1200
P-253	27	J-61	J-512	8	Ductile Iron	130	0.0	19.00	0.1200
P-254	46	J-231	J-327	16	Ductile Iron	130	0.0	-17.00	0.0300
P-255	18	J-327	J-189	16	Ductile Iron	130	0.0	-17.00	0.0300
P-256	3	J-518	J-513	16	Ductile Iron	130	0.0	-52.00	0.0800
P-257	228	J-513	J-291	16	Ductile Iron	130	0.0	-52.00	0.0800
P-259	121	J-197	J-282	12	Ductile Iron	130	0.0	4.00	0.0100
P-261	19	J-375	J-226	8	Ductile Iron	130	0.0	1.00	0.0000
P-262	34	J-227	J-86	8	Ductile Iron	130	0.0	1.00	0.0000
P-266	22	J-478	J-295	12	Ductile Iron	130	0.0	-13.00	0.0400
P-267	6	J-295	J-297	12	Ductile Iron	130	0.0	-13.00	0.0400
P-268	60	J-201	J-191	8	Ductile Iron	130	0.0	0.00	0.0000
P-269	237	J-191	J-139	8	Ductile Iron	130	0.0	0.00	0.0000

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-277	58	J-244	J-224	8	Ductile Iron	130	0.0	1.00	0.0000
P-278	29	J-225	J-367	8	Ductile Iron	130	0.0	1.00	0.0000
P-279	23	J-367	J-262	8	Ductile Iron	130	0.0	0.00	0.0000
P-280	340	J-86	J-33	8	Ductile Iron	130	0.0	1.00	0.0000
P-281	110	J-33	J-244	8	Ductile Iron	130	0.0	1.00	0.0000
P-283	156	J-209	J-132	12	Ductile Iron	130	0.0	1.00	0.0000
P-284	140	J-367	J-202	12	Ductile Iron	130	0.0	1.00	0.0000
P-285	45	J-202	J-209	12	Ductile Iron	130	0.0	1.00	0.0000
P-286	201	J-297	J-459	12	Ductile Iron	130	0.0	-14.00	0.0400
P-288	16	J-459	J-413	12	Ductile Iron	130	0.0	-14.00	0.0400
P-289	4	J-413	J-411	12	Ductile Iron	130	0.0	-15.00	0.0400
P-290	95	J-233	J-457	16	Ductile Iron	130	0.0	-2.00	0.0000
P-291	195	J-457	J-261	16	Ductile Iron	130	0.0	-2.00	0.0000
P-292	38	J-421	J-456	16	Ductile Iron	130	0.0	-55.00	0.0900
P-293	69	J-456	J-519	16	Ductile Iron	130	0.0	-55.00	0.0900
P-294	36	J-333	J-373	16	Ductile Iron	130	0.0	-67.00	0.1100
P-295	875	J-373	J-365	16	Ductile Iron	130	0.0	-67.00	0.1100
P-300	190	J-261	J-434	16	Ductile Iron	130	0.0	-6.00	0.0100
P-301	77	J-434	J-496	16	Ductile Iron	130	0.0	-6.00	0.0100
P-302	20	J-187	J-428	16	Ductile Iron	130	0.0	-8.00	0.0100
P-303	40	J-428	J-446	16	Ductile Iron	130	0.0	-8.00	0.0100
P-304	310	J-571	J-423	16	Ductile Iron	130	0.0	-26.00	0.0400
P-309	214	J-270	J-373	12	Ductile Iron	130	0.0	0.00	0.0000
P-310	32	J-423	J-387	16	Ductile Iron	130	0.0	-26.00	0.0400
P-311	23	J-387	J-426	16	Ductile Iron	130	0.0	-26.00	0.0400
P-312	184	J-151	J-125	8	Ductile Iron	130	0.0	1.00	0.0000
P-314	65	J-157	J-171	12	Ductile Iron	130	0.0	1.00	0.0000
P-315	137	J-171	J-372	12	Ductile Iron	130	0.0	0.00	0.0000
P-316	16	J-153	J-143	12	Ductile Iron	130	0.0	1.00	0.0000
P-317	32	J-143	J-156	12	Ductile Iron	130	0.0	1.00	0.0000
P-318	100	J-353	J-101	12	Ductile Iron	130	0.0	-17.00	0.0500
P-319	149	J-101	J-301	12	Ductile Iron	130	0.0	-17.00	0.0500
P-330	274	J-272	J-181	12	Ductile Iron	130	0.0	4.00	0.0100
P-332	80	J-181	J-51	12	Ductile Iron	130	0.0	4.00	0.0100
P-333	67	J-51	J-197	12	Ductile Iron	130	0.0	4.00	0.0100
P-334	33	J-464	J-154	30	Ductile Iron	130	0.0	87.00	0.0400
P-336	10	J-154	J-152	30	Ductile Iron	130	0.0	87.00	0.0400
P-337	708	J-152	J-395	30	Ductile Iron	130	0.0	87.00	0.0400
P-338	154	J-363	J-73	12	Ductile Iron	130	0.0	-17.00	0.0500
P-339	246	J-73	J-168	12	Ductile Iron	130	0.0	-17.00	0.0500
P-340	89	J-156	J-137	12	Ductile Iron	130	0.0	1.00	0.0000
P-341	185	J-137	J-367	12	Ductile Iron	130	0.0	1.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-342	51	J-365	J-71	12	Ductile Iron	130	0.0	-36.00	0.1000
P-343	145	J-71	J-297	12	Ductile Iron	130	0.0	-36.00	0.1000
P-348	5	J-223	J-106	12	Ductile Iron	130	0.0	-17.00	0.0500
P-350	10	J-106	J-67	12	Ductile Iron	130	0.0	-17.00	0.0500
P-351	263	J-67	J-69	12	Ductile Iron	130	0.0	-17.00	0.0500
P-352	15	J-277	J-282	16	Ductile Iron	130	0.0	6.00	0.0100
P-353	5	J-282	J-298	16	Ductile Iron	130	0.0	6.00	0.0100
P-354	72	J-276	J-134	12	Ductile Iron	130	0.0	6.00	0.0200
P-355	21	J-134	J-448	12	Ductile Iron	130	0.0	6.00	0.0200
P-357	88	J-273	J-559	12	Ductile Iron	130	0.0	-2.00	0.0100
P-358	583	J-364	J-271	12	Ductile Iron	130	0.0	-24.00	0.0700
P-360	7	J-558	J-264	12	Ductile Iron	130	0.0	-5.00	0.0200
P-362	73	J-563	J-242	16	Ductile Iron	130	0.0	-8.00	0.0100
P-363	149	J-242	J-193	16	Ductile Iron	130	0.0	-8.00	0.0100
P-364	173	J-607	J-259	16	Ductile Iron	130	0.0	-38.00	0.0600
P-365	180	J-259	J-173	16	Ductile Iron	130	0.0	-38.00	0.0600
P-366	82	J-580	J-256	16	Ductile Iron	130	0.0	-8.00	0.0100
P-367	418	J-256	J-619	16	Ductile Iron	130	0.0	-8.00	0.0100
P-368	4	J-24	J-7	16	Ductile Iron	130	0.0	-17.00	0.0300
P-369	20	J-7	J-120	16	Ductile Iron	130	0.0	-17.00	0.0300
P-370	49	J-355	J-77	12	Ductile Iron	130	0.0	-17.00	0.0500
P-371	186	J-77	J-353	12	Ductile Iron	130	0.0	-17.00	0.0500
P-372	155	J-375	J-43	12	Ductile Iron	130	0.0	1.00	0.0000
P-373	119	J-43	J-157	12	Ductile Iron	130	0.0	1.00	0.0000
P-374	56	J-325	J-63	12	Ductile Iron	130	0.0	-36.00	0.1000
P-375	392	J-63	J-291	12	Ductile Iron	130	0.0	-36.00	0.1000
P-376	22	J-402	J-200	8	Ductile Iron	130	0.0	-9.00	0.0600
P-377	1316	J-200	J-516	8	Ductile Iron	130	0.0	-9.00	0.0600
P-378	69	J-372	J-47	12	Ductile Iron	130	0.0	0.00	0.0000
P-379	87	J-47	J-270	12	Ductile Iron	130	0.0	0.00	0.0000
P-380	207	J-487	J-183	12	Ductile Iron	130	0.0	-36.00	0.1000
P-381	301	J-183	J-489	12	Ductile Iron	130	0.0	-38.00	0.1100
P-382	731	J-213	J-180	8	Ductile Iron	130	0.0	-13.00	0.0800
P-383	19	J-180	J-427	8	Ductile Iron	130	0.0	-15.00	0.1000
P-384	19	J-315	J-150	12	Ductile Iron	130	0.0	4.00	0.0100
P-385	164	J-150	J-469	12	Ductile Iron	130	0.0	4.00	0.0100
P-386	200	J-121	J-5	16	Ductile Iron	130	0.0	-17.00	0.0300
P-387	399	J-5	J-287	16	Ductile Iron	130	0.0	-17.00	0.0300
P-388	6	J-278	J-148	12	Ductile Iron	130	0.0	0.00	0.0000
P-389	11	J-148	J-279	12	Ductile Iron	130	0.0	0.00	0.0000
P-390	52	J-131	J-91	12	Ductile Iron	130	0.0	0.00	0.0000
P-391	77	J-91	J-273	12	Ductile Iron	130	0.0	0.00	0.0000



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-392	213	J-662	J-133	12	Ductile Iron	130	0.0	0.00	0.0000
P-393	833	J-133	J-649	12	Ductile Iron	130	0.0	0.00	0.0000
P-394	146	J-461	J-125	8	Ductile Iron	130	0.0	11.00	0.0700
P-395	128	J-125	J-582	8	Ductile Iron	130	0.0	11.00	0.0700
P-396	341	J-125	J-9	8	Ductile Iron	130	0.0	1.00	0.0000
P-397	20	J-9	J-153	8	Ductile Iron	130	0.0	1.00	0.0000
P-398	23	J-425	J-82	8	Ductile Iron	130	0.0	-6.00	0.0400
P-399	26	J-82	J-386	8	Ductile Iron	130	0.0	-6.00	0.0400
P-400	257	J-489	J-73	12	Ductile Iron	130	0.0	-38.00	0.1100
P-401	74	J-73	J-531	12	Ductile Iron	130	0.0	-38.00	0.1100
P-402	8	J-615	J-57	8	Ductile Iron	130	0.0	0.00	0.0000
P-403	489	J-57	J-616	8	Ductile Iron	130	0.0	0.00	0.0000
P-404	581	J-651	J-31	8	Ductile Iron	130	0.0	-9.00	0.0600
P-405	643	J-31	J-520	8	Ductile Iron	130	0.0	-12.00	0.0800
P-406	88	J-520	J-25	8	Ductile Iron	130	0.0	-14.00	0.0900
P-407	24	J-25	J-401	8	Ductile Iron	130	0.0	-14.00	0.0900
P-410	91	J-247	J-91	8	Ductile Iron	130	0.0	19.00	0.1200
P-411	62	J-91	J-326	8	Ductile Iron	130	0.0	19.00	0.1200
P-412	2	J-600	J-284	6	Ductile Iron	130	0.0	-3.00	0.0300
P-414	2	J-284	J-600	6	Ductile Iron	130	0.0	3.00	0.0300
P-415	372	J-600	J-441	6	Ductile Iron	130	0.0	5.00	0.0600
P-416	822	J-614	J-284	6	Ductile Iron	130	0.0	7.00	0.0800
P-417	2	J-284	J-652	6	Ductile Iron	130	0.0	0.00	0.0000
P-418	47	J-263	J-24	16	Ductile Iron	130	0.0	0.00	0.0000
P-419	5	J-24	J-254	16	Ductile Iron	130	0.0	17.00	0.0300
P-435	17	J-400	J-534	8	Ductile Iron	130	0.0	13.00	0.0800
P-437	1	J-534	J-639	6	Ductile Iron	130	0.0	12.00	0.1400
P-438	27	J-639	J-401	8	Ductile Iron	130	0.0	14.00	0.0900
P-441	17	J-426	J-640	8	Ductile Iron	130	0.0	14.00	0.0900
P-443	1	J-640	J-641	6	Ductile Iron	130	0.0	12.00	0.1400
P-444	32	J-641	J-427	8	Ductile Iron	130	0.0	15.00	0.1000
P-445	14	J-421	J-642	8	Ductile Iron	130	0.0	15.00	0.1000
P-447	1	J-642	J-592	6	Ductile Iron	130	0.0	12.00	0.1400
P-448	34	J-592	J-422	8	Ductile Iron	130	0.0	16.00	0.1000
P-449	17	J-385	J-673	8	Ductile Iron	130	0.0	5.00	0.0300
P-451	1	J-673	J-624	6	Ductile Iron	130	0.0	5.00	0.0600
P-452	24	J-624	J-386	8	Ductile Iron	130	0.0	6.00	0.0400
P-453	24	J-321	J-69	12	Ductile Iron	130	0.0	-13.00	0.0400
P-454	5	J-69	J-322	12	Ductile Iron	130	0.0	-13.00	0.0400
P-457	90	J-581	J-4	16	Ductile Iron	130	0.0	9.00	0.0200
P-459	269	J-465	J-383	12	Ductile Iron	130	0.0	-105.00	0.3000
P-460	341	J-383	J-348	12	Ductile Iron	130	0.0	65.00	0.1800

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-462	69	J-271	J-404	12	Ductile Iron	130	0.0	-26.00	0.0700
P-463	312	J-404	J-664	12	Ductile Iron	130	0.0	-43.00	0.1200
P-464	82	J-4	J-405	16	Ductile Iron	130	0.0	6.00	0.0100
P-465	98	J-405	J-435	16	Ductile Iron	130	0.0	0.00	0.0000
P-470	1291	J-544	J-406	8	Ductile Iron	130	0.0	5.00	0.0300
P-474	641	J-403	J-407	8	Ductile Iron	130	0.0	12.00	0.0800
P-475	22	J-20	J-408	16	Ductile Iron	130	0.0	-94.00	0.1500
P-476	601	J-408	J-635	16	Ductile Iron	130	0.0	-100.00	0.1600
P-477	348	J-214	J-408	8	Ductile Iron	130	0.0	-6.00	0.0400
P-479	776	J-409	J-405	8	Ductile Iron	130	0.0	-6.00	0.0400
P-480	601	J-409	J-410	8	Ductile Iron	130	0.0	3.00	0.0200
P-481	378	J-648	J-411	8	Ductile Iron	130	0.0	1.00	0.0100
P-482	328	J-411	J-88	8	Ductile Iron	130	0.0	1.00	0.0100
P-483	52	J-136	J-412	8	Ductile Iron	130	0.0	16.00	0.1000
P-484	372	J-412	J-565	8	Ductile Iron	130	0.0	16.00	0.1000
P-485	426	J-412	J-413	8	Ductile Iron	130	0.0	0.00	0.0000
P-486	458	J-625	J-609	8	Ductile Iron	130	0.0	8.00	0.0500
P-487	20	J-264	J-414	12	Ductile Iron	130	0.0	-5.00	0.0200
P-488	218	J-414	J-234	12	Ductile Iron	130	0.0	-7.00	0.0200
P-489	685	J-414	J-415	8	Ductile Iron	130	0.0	1.00	0.0100
P-490	245	J-605	J-416	8	Ductile Iron	130	0.0	-4.00	0.0300
P-493	344	J-418	J-419	8	Ductile Iron	130	0.0	-4.00	0.0300
P-494	363	J-419	J-88	8	Ductile Iron	130	0.0	-4.00	0.0300
P-495	506	J-416	J-418	8	Ductile Iron	130	0.0	-4.00	0.0300
P-496	136	J-664	J-421	12	Ductile Iron	130	0.0	-45.00	0.1300
P-497	191	J-421	J-348	12	Ductile Iron	130	0.0	-46.00	0.1300
P-498	618	J-404	J-422	8	Ductile Iron	130	0.0	17.00	0.1100
P-499	666	J-422	J-407	8	Ductile Iron	130	0.0	14.00	0.0900
P-501	652	J-423	J-23	8	Ductile Iron	130	0.0	-9.00	0.0600
P-502	482	J-406	J-424	8	Ductile Iron	130	0.0	-3.00	0.0200
P-503	221	J-424	J-423	8	Ductile Iron	130	0.0	-5.00	0.0300
P-505	266	J-425	J-406	8	Ductile Iron	130	0.0	14.00	0.0900
P-506	619	J-407	J-426	8	Ductile Iron	130	0.0	23.00	0.1400
P-507	419	J-426	J-425	8	Ductile Iron	130	0.0	17.00	0.1100
P-508	571	J-406	J-427	8	Ductile Iron	130	0.0	16.00	0.1000
P-510	468	J-427	J-428	8	Ductile Iron	130	0.0	11.00	0.0700
P-513	344	J-429	J-409	8	Ductile Iron	130	0.0	-3.00	0.0200
P-514	221	J-428	J-430	8	Ductile Iron	130	0.0	6.00	0.0400
P-515	245	J-430	J-429	8	Ductile Iron	130	0.0	2.00	0.0100
P-520	606	J-348	J-431	8	Ductile Iron	130	0.0	19.00	0.1200
P-521	675	J-431	J-403	8	Ductile Iron	130	0.0	15.00	0.1000
P-524	189	J-415	J-433	8	Ductile Iron	130	0	1	0.01



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-525	237	J-433	J-434	8	Ductile Iron	130	0	1	0.01
P-526	196	J-434	J-35	8	Ductile Iron	130	0	1	0.01



Label	Elevation(ft)	Flow(gpm)	Hydraulic Grade (ft)
R-1	1,300.00	170	1,300.00
R-2	1,287.10	119	1,287.10
R-3	1,285.38	0	1,285.38



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,286.21	0	1,457.90	74
J-2	1,286.20	0	1,457.90	74
J-3	1,286.21	0	1,457.90	74
J-4	1,287.47	0	1,457.90	74
J-5	1,287.47	6	1,457.90	74
J-6	1,287.63	0	1,457.90	74
J-7	1,287.63	0	1,457.90	74
J-10	1,282.55	0	1,457.83	76
J-11	1,282.55	0	1,457.83	76
J-12	1,282.56	0	1,457.83	76
J-13	1,295.30	3	1,457.91	70
J-14	1,295.31	0	1,457.91	70
J-15	1,286.20	0	1,457.90	74
J-16	1,286.20	0	1,457.90	74
J-19	1,295.33	0	1,457.91	70
J-20	1,296.92	0	1,457.91	70
J-21	1,296.71	0	1,457.91	70
J-22	1,290.04	0	1,457.90	73
J-23	1,290.02	1	1,457.90	73
J-24	1,293.63	0	1,457.85	71
J-25	1,293.62	0	1,457.85	71
J-26	1,291.44	0	1,457.85	72
J-27	1,291.45	5	1,457.85	72
J-28	1,282.60	0	1,457.83	76
J-29	1,282.58	0	1,457.83	76
J-30	1,291.91	0	1,457.84	72
J-31	1,291.90	5	1,457.84	72
J-32	1,288.87	0	1,457.90	73
J-33	1,288.88	0	1,457.90	73
J-34	1,280.00	0	1,457.83	77
J-35	1,280.00	5	1,457.83	77
J-36	1,290.00	3	1,457.84	73
J-37	1,290.00	0	1,457.84	73
J-38	1,286.06	0	1,457.90	74
J-39	1,286.06	0	1,457.90	74
J-40	1,287.34	0	1,457.90	74
J-41	1,287.33	0	1,457.90	74
J-42	1,286.02	0	1,457.90	74
J-43	1,286.02	0	1,457.90	74
J-52	1,282.73	5	1,457.83	76
J-53	1,282.76	0	1,457.83	76
J-56	1,284.34	0	1,457.84	75
J-57	1,284.34	0	1,457.84	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-63	1,288.88	0	1,457.90	73
J-64	1,288.88	0	1,457.90	73
J-65	1,289.81	5	1,457.84	73
J-66	1,289.79	0	1,457.84	73
J-67	1,300.00	0	1,457.92	68
J-68	1,300.00	0	1,457.92	68
J-69	1,300.00	0	1,457.92	68
J-70	1,300.00	0	1,457.92	68
J-73	1,281.08	0	1,457.89	76
J-74	1,281.07	0	1,457.89	77
J-75	1,281.71	5	1,457.83	76
J-76	1,281.72	0	1,457.83	76
J-77	1,290.00	0	1,457.85	73
J-78	1,290.00	3	1,457.85	73
J-79	1,282.29	5	1,457.83	76
J-80	1,282.26	0	1,457.83	76
J-81	1,294.53	0	1,457.85	71
J-82	1,294.54	0	1,457.85	71
J-83	1,288.32	0	1,457.90	73
J-84	1,288.30	0	1,457.90	73
J-85	1,290.29	3	1,457.85	72
J-86	1,290.32	0	1,457.85	72
J-87	1,282.10	0	1,457.83	76
J-88	1,282.07	4	1,457.83	76
J-91	1,282.43	0	1,457.83	76
J-92	1,282.41	0	1,457.83	76
J-93	1,286.20	0	1,457.90	74
J-94	1,286.19	0	1,457.90	74
J-95	1,287.69	0	1,457.90	74
J-96	1,287.71	0	1,457.90	74
J-97	1,287.75	0	1,457.90	74
J-98	1,287.77	8	1,457.90	74
J-99	1,287.97	0	1,457.90	74
J-100	1,287.97	0	1,457.90	74
J-101	1,288.28	0	1,457.90	73
J-102	1,288.30	0	1,457.90	73
J-105	1,285.07	0	1,457.84	75
J-106	1,285.10	4	1,457.84	75
J-107	1,296.73	5	1,457.91	70
J-108	1,296.73	0	1,457.91	70
J-115	1,287.08	0	1,457.91	74
J-116	1,287.10	0	1,457.95	74
J-117	1,299.66	0	1,457.92	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-118	1,299.61	0	1,457.92	68
J-123	1,300.00	0	1,457.94	68
J-124	1,300.00	0	1,457.94	68
J-125	1,280.00	0	1,457.84	77
J-126	1,280.00	0	1,457.84	77
J-128	1,282.74	0	1,457.83	76
J-129	1,282.74	2	1,457.83	76
J-130	1,282.41	0	1,457.83	76
J-131	1,282.41	0	1,457.83	76
J-132	1,287.94	0	1,457.90	74
J-133	1,287.95	0	1,457.90	74
J-134	1,287.33	0	1,457.85	74
J-135	1,287.29	0	1,457.85	74
J-136	1,287.37	2	1,457.85	74
J-137	1,287.36	0	1,457.85	74
J-138	1,280.26	0	1,457.83	77
J-139	1,280.30	0	1,457.83	77
J-140	1,280.86	0	1,457.83	77
J-141	1,280.83	1	1,457.83	77
J-142	1,288.87	0	1,457.90	73
J-143	1,288.87	0	1,457.90	73
J-144	1,280.00	0	1,457.84	77
J-145	1,280.00	0	1,457.84	77
J-146	1,284.22	0	1,457.85	75
J-147	1,284.23	0	1,457.85	75
J-148	1,282.74	0	1,457.83	76
J-149	1,282.75	0	1,457.83	76
J-150	1,282.53	0	1,457.85	76
J-151	1,282.57	0	1,457.85	76
J-152	1,300.00	0	1,457.92	68
J-153	1,300.00	0	1,457.92	68
J-154	1,300.00	0	1,457.92	68
J-155	1,300.00	0	1,457.92	68
J-160	1,285.34	0	1,457.85	75
J-161	1,285.38	0	1,457.85	75
J-162	1,300.00	0	1,457.92	68
J-163	1,300.00	0	1,457.92	68
J-164	1,287.53	0	1,457.90	74
J-165	1,287.55	0	1,457.90	74
J-166	1,284.46	0	1,457.85	75
J-167	1,284.51	3	1,457.85	75
J-170	1,280.00	0	1,457.83	77
J-173	1,283.43	0	1,457.90	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-174	1,283.62	0	1,457.90	75
J-179	1,293.02	0	1,457.85	71
J-180	1,293.00	4	1,457.85	71
J-181	1,280.00	0	1,457.84	77
J-182	1,280.00	0	1,457.84	77
J-183	1,280.00	3	1,457.88	77
J-184	1,280.00	0	1,457.88	77
J-185	1,282.23	0	1,457.85	76
J-186	1,282.18	0	1,457.85	76
J-187	1,294.21	0	1,457.85	71
J-188	1,294.19	0	1,457.85	71
J-189	1,286.00	0	1,457.83	74
J-190	1,285.95	3	1,457.83	74
J-193	1,290.04	0	1,457.85	73
J-195	1,287.68	0	1,457.90	74
J-196	1,287.66	0	1,457.90	74
J-197	1,283.22	0	1,457.83	76
J-198	1,283.22	0	1,457.83	76
J-199	1,288.46	0	1,457.90	73
J-200	1,288.48	0	1,457.90	73
J-203	1,282.25	0	1,457.83	76
J-204	1,282.24	3	1,457.83	76
J-205	1,288.69	0	1,457.90	73
J-212	1,290.41	0	1,457.84	72
J-213	1,290.38	5	1,457.84	72
J-214	1,295.27	0	1,457.91	70
J-215	1,295.85	0	1,457.91	70
J-216	1,295.80	0	1,457.91	70
J-217	1,288.26	0	1,457.90	73
J-218	1,288.29	0	1,457.90	73
J-219	1,288.80	1	1,457.90	73
J-220	1,288.83	0	1,457.90	73
J-227	1,280.00	0	1,457.85	77
J-232	1,286.38	0	1,457.90	74
J-233	1,286.35	0	1,457.90	74
J-234	1,282.61	5	1,457.83	76
J-235	1,282.14	0	1,457.85	76
J-236	1,282.11	0	1,457.85	76
J-239	1,282.11	0	1,457.85	76
J-240	1,290.00	0	1,457.85	73
J-241	1,290.00	0	1,457.85	73
J-242	1,290.00	0	1,457.85	73
J-243	1,290.00	0	1,457.85	73

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day Demands
Junction Table



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-252	1,282.06	0	1,457.89	76
J-253	1,282.03	0	1,457.89	76
J-254	1,291.78	0	1,457.85	72
J-255	1,291.80	0	1,457.85	72
J-256	1,290.00	0	1,457.85	73
J-257	1,282.23	0	1,457.85	76
J-259	1,283.04	0	1,457.90	76
J-260	1,282.85	0	1,457.90	76
J-261	1,286.03	0	1,457.90	74
J-262	1,286.06	3	1,457.90	74
J-263	1,290.00	0	1,457.85	73
J-264	1,282.88	0	1,457.83	76
J-265	1,282.80	3	1,457.83	76
J-266	1,282.32	0	1,457.85	76
J-271	1,300.00	4	1,457.92	68
J-272	1,300.00	0	1,457.92	68
J-273	1,282.48	3	1,457.83	76
J-274	1,282.44	0	1,457.83	76
J-276	1,287.84	0	1,457.85	74
J-277	1,287.86	0	1,457.85	74
J-278	1,282.73	0	1,457.83	76
J-279	1,282.74	0	1,457.83	76
J-280	1,288.87	0	1,457.90	73
J-281	1,286.24	0	1,457.90	74
J-282	1,287.88	0	1,457.85	74
J-284	1,289.28	0	1,457.87	73
J-285	1,289.33	0	1,457.87	73
J-286	1,298.92	2	1,457.92	69
J-287	1,298.85	0	1,457.92	69
J-290	1,285.77	0	1,457.90	74
J-291	1,286.38	0	1,457.90	74
J-292	1,300.00	0	1,457.92	68
J-293	1,300.00	0	1,457.92	68
J-294	1,300.00	0	1,457.92	68
J-295	1,300.00	0	1,457.92	68
J-296	1,300.00	0	1,457.92	68
J-297	1,300.00	0	1,457.92	68
J-298	1,287.88	0	1,457.85	74
J-299	1,291.84	0	1,457.85	72
J-302	1,300.00	0	1,457.92	68
J-305	1,287.21	0	1,457.85	74
J-306	1,287.32	0	1,457.85	74
J-307	1,288.89	0	1,457.90	73



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-311	1,300.00	0	1,457.92	68
J-312	1,299.91	1	1,457.92	68
J-314	1,282.43	0	1,457.85	76
J-315	1,282.43	0	1,457.85	76
J-321	1,300.00	0	1,457.92	68
J-322	1,300.00	0	1,457.92	68
J-323	1,286.23	0	1,457.90	74
J-324	1,286.30	0	1,457.90	74
J-325	1,286.06	0	1,457.90	74
J-326	1,286.10	0	1,457.90	74
J-327	1,300.00	0	1,457.92	68
J-330	1,287.12	0	1,457.90	74
J-333	1,290.06	0	1,457.86	73
J-334	1,290.00	0	1,457.86	73
J-336	1,299.05	0	1,457.91	69
J-337	1,299.07	0	1,457.91	69
J-338	1,300.00	0	1,457.92	68
J-339	1,300.00	0	1,457.92	68
J-340	1,287.48	0	1,457.90	74
J-341	1,287.57	0	1,457.90	74
J-342	1,300.00	0	1,457.92	68
J-345	1,288.34	0	1,457.90	73
J-346	1,285.59	0	1,457.90	75
J-348	1,300.00	0	1,457.93	68
J-349	1,293.78	0	1,457.85	71
J-350	1,293.92	0	1,457.85	71
J-355	1,286.32	0	1,457.90	74
J-356	1,280.00	0	1,457.83	77
J-357	1,280.00	3	1,457.83	77
J-361	1,282.53	0	1,457.83	76
J-362	1,282.60	3	1,457.83	76
J-363	1,300.00	0	1,457.92	68
J-364	1,300.00	0	1,457.92	68
J-365	1,290.00	1	1,457.87	73
J-366	1,290.00	0	1,457.87	73
J-367	1,286.28	0	1,457.90	74
J-368	1,286.34	0	1,457.90	74
J-369	1,290.00	0	1,457.87	73
J-370	1,290.00	0	1,457.87	73
J-371	1,280.00	0	1,457.84	77
J-372	1,280.00	0	1,457.84	77
J-373	1,290.21	0	1,457.86	73
J-374	1,290.16	0	1,457.86	73



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-375	1,288.34	0	1,457.85	73
J-377	1,290.00	0	1,457.86	73
J-378	1,290.00	0	1,457.86	73
J-382	1,300.00	0	1,457.92	68
J-383	1,300.00	0	1,457.93	68
J-384	1,300.00	2	1,457.94	68
J-385	1,294.82	0	1,457.85	71
J-386	1,294.65	0	1,457.85	71
J-387	1,293.18	0	1,457.85	71
J-389	1,280.00	3	1,457.83	77
J-390	1,280.00	0	1,457.83	77
J-391	1,293.13	0	1,457.85	71
J-393	1,300.00	0	1,457.92	68
J-394	1,299.97	0	1,457.92	68
J-395	1,300.00	0	1,457.92	68
J-396	1,300.00	0	1,457.92	68
J-397	1,289.50	0	1,457.87	73
J-398	1,286.59	0	1,457.90	74
J-399	1,286.50	0	1,457.90	74
J-400	1,293.77	0	1,457.85	71
J-401	1,293.66	0	1,457.85	71
J-402	1,288.43	0	1,457.90	73
J-403	1,287.92	0	1,457.90	74
J-404	1,287.79	0	1,457.90	74
J-405	1,300.00	0	1,457.92	68
J-406	1,300.00	0	1,457.92	68
J-407	1,299.84	0	1,457.92	68
J-408	1,299.64	0	1,457.92	68
J-409	1,289.66	0	1,457.90	73
J-410	1,289.78	0	1,457.90	73
J-411	1,300.00	0	1,457.92	68
J-412	1,300.00	0	1,457.92	68
J-413	1,300.00	0	1,457.92	68
J-414	1,286.64	0	1,457.90	74
J-415	1,287.00	0	1,457.91	74
J-416	1,293.68	0	1,457.85	71
J-417	1,299.52	0	1,457.92	69
J-418	1,289.42	2	1,457.90	73
J-419	1,289.36	0	1,457.90	73
J-421	1,290.23	0	1,457.85	73
J-422	1,290.24	0	1,457.85	73
J-423	1,293.26	0	1,457.85	71
J-425	1,294.44	4	1,457.85	71



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-426	1,293.12	0	1,457.85	71
J-427	1,293.03	0	1,457.85	71
J-428	1,294.24	0	1,457.85	71
J-429	1,294.04	0	1,457.85	71
J-430	1,286.20	0	1,457.90	74
J-431	1,286.36	0	1,457.89	74
J-432	1,286.47	0	1,457.89	74
J-434	1,286.19	0	1,457.90	74
J-435	1,287.44	3	1,457.90	74
J-436	1,280.00	0	1,457.84	77
J-437	1,282.31	0	1,457.83	76
J-438	1,287.29	49	1,457.88	74
J-439	1,287.36	0	1,457.88	74
J-440	1,290.00	0	1,457.86	73
J-441	1,290.00	0	1,457.86	73
J-442	1,290.00	0	1,457.85	73
J-443	1,290.00	0	1,457.85	73
J-444	1,288.18	0	1,457.85	73
J-446	1,294.31	0	1,457.85	71
J-447	1,290.00	1	1,457.86	73
J-448	1,287.18	0	1,457.85	74
J-449	1,287.13	0	1,457.85	74
J-450	1,285.92	16	1,457.85	74
J-451	1,285.80	0	1,457.85	74
J-453	1,284.32	0	1,457.85	75
J-454	1,284.01	0	1,457.85	75
J-456	1,290.26	0	1,457.85	73
J-457	1,286.15	0	1,457.90	74
J-458	1,300.00	0	1,457.92	68
J-459	1,300.00	0	1,457.92	68
J-460	1,280.00	0	1,457.84	77
J-461	1,280.00	0	1,457.84	77
J-462	1,287.98	0	1,457.90	74
J-463	1,287.94	0	1,457.90	74
J-464	1,300.00	0	1,457.92	68
J-465	1,300.00	0	1,457.92	68
J-466	1,282.42	0	1,457.85	76
J-467	1,288.08	1	1,457.90	73
J-468	1,288.27	0	1,457.90	73
J-469	1,283.38	0	1,457.85	75
J-470	1,283.23	0	1,457.85	76
J-471	1,299.01	0	1,457.92	69
J-472	1,287.57	0	1,457.90	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-473	1,287.52	0	1,457.90	74
J-475	1,287.67	0	1,457.90	74
J-476	1,282.27	0	1,457.83	76
J-477	1,281.94	0	1,457.83	76
J-478	1,300.00	0	1,457.92	68
J-479	1,299.86	0	1,457.92	68
J-480	1,299.61	2	1,457.92	68
J-483	1,298.69	1	1,457.91	69
J-484	1,300.00	0	1,457.92	68
J-485	1,288.36	0	1,457.85	73
J-487	1,280.00	0	1,457.88	77
J-489	1,280.82	0	1,457.89	77
J-491	1,280.00	0	1,457.88	77
J-492	1,280.00	0	1,457.88	77
J-496	1,286.29	0	1,457.90	74
J-498	1,287.40	0	1,457.90	74
J-499	1,282.76	0	1,457.83	76
J-500	1,280.00	12	1,457.84	77
J-501	1,286.30	0	1,457.89	74
J-502	1,286.55	0	1,457.89	74
J-504	1,286.78	0	1,457.90	74
J-505	1,287.22	0	1,457.90	74
J-506	1,287.19	0	1,457.91	74
J-509	1,284.54	0	1,457.90	75
J-510	1,285.23	0	1,457.90	75
J-511	1,299.59	0	1,457.92	69
J-512	1,280.00	0	1,457.85	77
J-513	1,285.85	0	1,457.90	74
J-514	1,286.50	0	1,457.90	74
J-516	1,290.00	2	1,457.90	73
J-518	1,285.84	0	1,457.90	74
J-519	1,290.31	0	1,457.85	72
J-520	1,293.47	4	1,457.85	71
J-524	1,281.77	0	1,457.89	76
J-526	1,287.21	0	1,457.90	74
J-528	1,289.60	0	1,457.90	73
J-531	1,281.18	0	1,457.89	76
J-532	1,287.52	0	1,457.85	74
J-533	1,294.10	0	1,457.85	71
J-534	1,293.74	0	1,457.85	71
J-535	1,287.45	0	1,457.90	74
J-536	1,287.54	0	1,457.90	74
J-537	1,288.06	2	1,457.90	73



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-543	1,285.32	0	1,457.85	75
J-544	1,290.00	1	1,457.90	73
J-546	1,286.30	0	1,457.89	74
J-547	1,281.20	1	1,457.83	76
J-550	1,288.60	0	1,457.90	73
J-552	1,299.98	0	1,457.92	68
J-557	1,284.17	0	1,457.85	75
J-558	1,282.88	3	1,457.83	76
J-559	1,282.73	0	1,457.83	76
J-560	1,282.06	1	1,457.83	76
J-561	1,283.24	3	1,457.83	76
J-562	1,286.82	0	1,457.90	74
J-563	1,290.00	0	1,457.85	73
J-565	1,285.36	0	1,457.84	75
J-568	1,287.63	0	1,457.90	74
J-571	1,293.10	0	1,457.85	71
J-572	1,282.00	0	1,457.83	76
J-573	1,292.36	1	1,457.91	72
J-578	1,294.30	8	1,457.91	71
J-579	1,280.00	0	1,457.88	77
J-580	1,290.00	0	1,457.85	73
J-581	1,287.61	4	1,457.90	74
J-582	1,280.00	0	1,457.83	77
J-583	1,286.49	0	1,457.90	74
J-585	1,290.00	4	1,457.85	73
J-588	1,296.06	8	1,457.92	70
J-590	1,284.18	4	1,457.84	75
J-592	1,290.15	0	1,457.85	73
J-593	1,290.05	0	1,457.86	73
J-594	1,280.96	0	1,457.83	77
J-596	1,287.73	0	1,457.90	74
J-597	1,280.52	0	1,457.85	77
J-598	1,283.73	0	1,457.90	75
J-599	1,282.35	0	1,457.89	76
J-600	1,289.29	1	1,457.87	73
J-602	1,280.00	0	1,457.87	77
J-605	1,280.25	5	1,457.83	77
J-606	1,280.72	1	1,457.83	77
J-607	1,282.85	0	1,457.90	76
J-608	1,289.62	16	1,457.85	73
J-609	1,284.63	2	1,457.85	75
J-610	1,298.28	0	1,457.92	69
J-613	1,287.22	3	1,457.90	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-614	1,286.42	1	1,457.88	74
J-615	1,284.29	0	1,457.84	75
J-616	1,287.06	8	1,457.84	74
J-617	1,294.88	2	1,457.91	71
J-618	1,297.09	0	1,457.91	70
J-619	1,291.42	0	1,457.85	72
J-620	1,280.00	0	1,457.85	77
J-623	1,287.65	0	1,457.85	74
J-624	1,294.76	0	1,457.85	71
J-625	1,287.04	0	1,457.85	74
J-626	1,300.00	0	1,457.92	68
J-627	1,280.00	0	1,457.85	77
J-628	1,282.30	0	1,457.85	76
J-629	1,287.12	3	1,457.85	74
J-630	1,287.21	3	1,457.85	74
J-632	1,287.88	5	1,457.84	74
J-633	1,285.82	3	1,457.83	74
J-635	1,300.00	0	1,457.91	68
J-638	1,293.02	0	1,457.91	71
J-639	1,293.71	0	1,457.85	71
J-640	1,293.11	0	1,457.85	71
J-641	1,293.07	0	1,457.85	71
J-642	1,290.16	0	1,457.85	73
J-643	1,290.00	0	1,457.90	73
J-646	1,287.37	0	1,457.90	74
J-648	1,283.82	3	1,457.83	75
J-649	1,289.38	0	1,457.90	73
J-651	1,290.10	3	1,457.84	73
J-652	1,289.27	0	1,457.87	73
J-661	1,300.00	0	1,457.92	68
J-662	1,287.37	0	1,457.90	74
J-664	1,300.00	3	1,457.92	68
J-667	1,282.25	0	1,457.85	76
J-673	1,294.74	0	1,457.85	71
J-1	1,280.00	0	1,457.85	77
J-2	1,280.00	0	1,457.85	77
J-5	1,280.32	0	1,457.85	77
J-6	1,280.33	0	1,457.85	77
J-7	1,280.26	0	1,457.85	77
J-8	1,280.27	0	1,457.85	77
J-9	1,280.00	0	1,457.85	77
J-10	1,280.00	0	1,457.85	77
J-13	1,280.00	0	1,457.85	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-14	1,280.00	0	1,457.85	77
J-15	1,280.00	0	1,457.85	77
J-16	1,280.00	0	1,457.85	77
J-17	1,280.00	0	1,457.85	77
J-18	1,280.00	0	1,457.85	77
J-19	1,280.00	0	1,457.85	77
J-20	1,280.00	0	1,457.85	77
J-21	1,280.00	0	1,457.87	77
J-22	1,280.00	0	1,457.87	77
J-23	1,280.20	0	1,457.85	77
J-24	1,280.23	0	1,457.85	77
J-33	1,280.00	0	1,457.85	77
J-34	1,280.00	0	1,457.85	77
J-43	1,280.00	0	1,457.85	77
J-44	1,280.00	0	1,457.85	77
J-47	1,280.00	0	1,457.85	77
J-48	1,280.00	0	1,457.85	77
J-49	1,280.29	0	1,457.85	77
J-50	1,280.32	0	1,457.85	77
J-51	1,283.91	0	1,457.85	75
J-52	1,283.91	0	1,457.85	75
J-53	1,281.92	0	1,457.85	76
J-54	1,281.95	0	1,457.85	76
J-55	1,280.00	0	1,457.85	77
J-56	1,280.00	0	1,457.85	77
J-61	1,280.00	0	1,457.85	77
J-62	1,280.00	0	1,457.85	77
J-63	1,280.00	0	1,457.87	77
J-64	1,280.00	0	1,457.87	77
J-65	1,280.00	0	1,457.87	77
J-66	1,280.00	0	1,457.87	77
J-67	1,280.00	0	1,457.85	77
J-68	1,280.00	0	1,457.85	77
J-69	1,280.00	0	1,457.85	77
J-70	1,280.00	0	1,457.85	77
J-71	1,280.00	0	1,457.86	77
J-72	1,280.00	0	1,457.86	77
J-73	1,280.00	0	1,457.86	77
J-74	1,280.00	0	1,457.86	77
J-77	1,280.00	0	1,457.86	77
J-78	1,280.00	0	1,457.86	77
J-81	1,280.00	0	1,457.86	77
J-82	1,280.00	0	1,457.86	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-85	1,280.00	0	1,457.85	77
J-86	1,280.00	0	1,457.85	77
J-91	1,280.00	0	1,457.85	77
J-101	1,280.00	0	1,457.86	77
J-102	1,280.00	0	1,457.86	77
J-106	1,280.00	0	1,457.85	77
J-107	1,280.00	0	1,457.85	77
J-120	1,280.41	0	1,457.85	77
J-121	1,280.41	0	1,457.85	77
J-125	1,280.00	0	1,457.85	77
J-126	1,280.00	0	1,457.85	77
J-129	1,286.89	0	1,457.85	74
J-131	1,280.34	0	1,457.85	77
J-132	1,280.25	0	1,457.85	77
J-137	1,280.00	0	1,457.85	77
J-138	1,280.00	0	1,457.85	77
J-139	1,280.00	0	1,457.85	77
J-140	1,280.00	0	1,457.85	77
J-142	1,280.00	0	1,457.85	77
J-143	1,280.00	0	1,457.85	77
J-150	1,280.00	0	1,457.85	77
J-151	1,280.00	0	1,457.85	77
J-152	1,280.00	0	1,457.85	77
J-153	1,280.00	0	1,457.85	77
J-154	1,280.00	0	1,457.85	77
J-155	1,280.00	0	1,457.85	77
J-156	1,280.00	0	1,457.85	77
J-157	1,280.00	0	1,457.85	77
J-163	1,280.00	0	1,457.86	77
J-164	1,280.00	0	1,457.86	77
J-165	1,280.00	0	1,457.86	77
J-166	1,280.00	0	1,457.86	77
J-167	1,280.00	0	1,457.88	77
J-168	1,280.00	0	1,457.86	77
J-169	1,280.00	0	1,457.86	77
J-171	1,280.00	0	1,457.85	77
J-172	1,280.00	0	1,457.85	77
J-177	1,280.00	0	1,457.85	77
J-178	1,280.00	0	1,457.85	77
J-181	1,284.14	0	1,457.85	75
J-185	1,280.00	0	1,457.85	77
J-186	1,280.00	0	1,457.85	77
J-189	1,280.00	0	1,457.85	77

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day Demands
Junction Table



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-190	1,280.00	0	1,457.85	77
J-191	1,280.00	0	1,457.85	77
J-192	1,280.00	0	1,457.85	77
J-193	1,280.00	0	1,457.85	77
J-194	1,280.00	0	1,457.85	77
J-195	1,280.46	0	1,457.85	77
J-196	1,280.32	0	1,457.85	77
J-197	1,283.77	0	1,457.85	75
J-200	1,280.00	0	1,457.85	77
J-201	1,280.00	0	1,457.85	77
J-202	1,280.09	0	1,457.85	77
J-203	1,280.00	0	1,457.85	77
J-204	1,280.11	0	1,457.85	77
J-209	1,280.12	0	1,457.85	77
J-210	1,280.00	0	1,457.85	77
J-212	1,280.00	0	1,457.85	77
J-213	1,280.00	0	1,457.85	77
J-214	1,280.00	0	1,457.85	77
J-215	1,280.00	0	1,457.85	77
J-222	1,280.21	0	1,457.85	77
J-223	1,280.00	0	1,457.85	77
J-224	1,280.00	0	1,457.85	77
J-225	1,280.00	0	1,457.85	77
J-226	1,280.00	0	1,457.85	77
J-227	1,280.00	0	1,457.85	77
J-229	1,284.25	0	1,457.85	75
J-231	1,280.00	0	1,457.85	77
J-232	1,285.15	0	1,457.85	75
J-233	1,285.17	0	1,457.85	75
J-235	1,281.81	0	1,457.85	76
J-237	1,283.17	0	1,457.85	76
J-239	1,285.61	0	1,457.85	75
J-242	1,286.43	0	1,457.85	74
J-244	1,280.00	0	1,457.85	77
J-245	1,280.00	0	1,457.85	77
J-246	1,280.00	0	1,457.86	77
J-247	1,280.00	0	1,457.86	77
J-250	1,283.79	0	1,457.85	75
J-254	1,280.26	0	1,457.85	77
J-255	1,280.53	0	1,457.85	77
J-260	1,280.00	0	1,457.85	77
J-262	1,280.08	0	1,457.85	77
J-263	1,280.02	0	1,457.85	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-266	1,280.00	0	1,457.85	77
J-268	1,280.56	0	1,457.85	77
J-270	1,280.00	0	1,457.85	77
J-272	1,285.07	0	1,457.85	75
J-276	1,280.00	0	1,457.85	77
J-277	1,280.00	0	1,457.85	77
J-282	1,283.67	0	1,457.85	75
J-284	1,280.00	0	1,457.85	77
J-287	1,280.00	0	1,457.85	77
J-291	1,280.00	0	1,457.87	77
J-293	1,280.00	0	1,457.87	77
J-296	1,280.00	0	1,457.86	77
J-297	1,280.00	0	1,457.86	77
J-298	1,280.00	0	1,457.85	77
J-301	1,280.00	0	1,457.86	77
J-302	1,280.00	0	1,457.86	77
J-312	1,280.00	0	1,457.85	77
J-321	1,280.00	0	1,457.86	77
J-322	1,280.00	0	1,457.86	77
J-324	1,280.00	0	1,457.87	77
J-325	1,280.00	0	1,457.87	77
J-326	1,280.00	0	1,457.85	77
J-327	1,280.00	0	1,457.85	77
J-331	1,280.00	0	1,457.85	77
J-332	1,280.00	0	1,457.85	77
J-336	1,280.00	0	1,457.85	77
J-340	1,280.00	0	1,457.85	77
J-343	1,280.00	0	1,457.85	77
J-349	1,280.00	0	1,457.86	77
J-353	1,280.00	0	1,457.86	77
J-355	1,280.00	0	1,457.86	77
J-363	1,280.00	0	1,457.86	77
J-365	1,280.00	0	1,457.86	77
J-366	1,280.55	0	1,457.85	77
J-367	1,280.00	0	1,457.85	77
J-370	1,280.00	0	1,457.86	77
J-372	1,280.00	0	1,457.85	77
J-373	1,280.00	0	1,457.85	77
J-375	1,280.00	0	1,457.85	77
J-378	1,280.00	0	1,457.87	77
J-380	1,291.16	5	1,457.90	72
J-381	1,290.64	4	1,457.89	72
J-382	1,291.34	4	1,457.89	72



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-383	1,292.53	5	1,457.89	72
J-384	1,293.13	3	1,457.89	71
J-385	1,291.24	3	1,457.90	72
J-386	1,292.88	3	1,457.89	71
J-387	1,290.03	3	1,457.86	73
J-389	1,298.00	3	1,457.92	69
J-401	1,294.11	0	1,457.85	71
J-403	1,296.44	5	1,457.91	70
J-404	1,300.00	0	1,457.92	68
J-405	1,287.46	0	1,457.90	74
J-406	1,293.77	8	1,457.90	71
J-407	1,296.91	5	1,457.91	70
J-408	1,297.02	0	1,457.91	70
J-409	1,289.32	0	1,457.89	73
J-410	1,287.47	5	1,457.89	74
J-411	1,282.10	0	1,457.83	76
J-412	1,287.12	0	1,457.85	74
J-413	1,287.12	0	1,457.85	74
J-414	1,282.85	0	1,457.83	76
J-415	1,282.85	0	1,457.83	76
J-416	1,280.25	0	1,457.83	77
J-418	1,280.25	0	1,457.83	77
J-419	1,282.07	0	1,457.83	76
J-421	1,300.00	2	1,457.93	68
J-422	1,298.51	5	1,457.91	69
J-423	1,291.83	6	1,457.90	72
J-424	1,292.44	4	1,457.90	72
J-425	1,294.41	4	1,457.90	71
J-426	1,295.42	9	1,457.90	70
J-427	1,292.40	9	1,457.89	72
J-428	1,291.27	8	1,457.89	72
J-429	1,290.15	8	1,457.89	73
J-430	1,290.74	6	1,457.89	72
J-431	1,296.44	5	1,457.92	70
J-433	1,280.00	0	1,457.83	77
J-434	1,280.00	0	1,457.83	77



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
1907	1,015	J-661	J-626	30	Ductile Iron	130	0	88	0.04
1908	62	J-464	J-465	12	Ductile Iron	130	0	-88	0.25
3565	8	J-166	J-167	6	Ductile Iron	130	0	0	0
3566	6	J-105	J-106	6	Ductile Iron	130	0	0	0
3961	6	J-93	J-94	6	Ductile Iron	130	0	0	0
3962	49	J-15	J-326	16	Ductile Iron	130	0	2	0
3963	2	J-15	J-16	16	Ductile Iron	130	0	-2	0
3983	526	J-573	J-544	8	Ductile Iron	130	0	14	0.09
4153	512	J-618	J-610	8	Ductile Iron	130	0	-16	0.1
4154	14	J-215	J-216	6	Ductile Iron	130	0	0	0
4308	289	J-585	J-78	8	Ductile Iron	130	0	-3	0.02
4311	9	J-189	J-190	8	Ductile Iron	130	0	0	0
8447	57	J-68	J-342	16	Ductile Iron	130	0	0	0
8449	40	J-382	J-67	16	Ductile Iron	130	0	-92	0.15
8823	20	J-302	J-70	12	Ductile Iron	130	0	0	0
8825	75	J-478	J-322	12	Ductile Iron	130	0	3	0.01
12390	66	J-465	J-393	12	Ductile Iron	130	0	16	0.05
12392	31	J-338	J-339	6	Ductile Iron	130	0	0	0
12393	297	J-411	J-363	12	Ductile Iron	130	0	-9	0.02
12397	682	J-367	J-646	6	Ductile Iron	130	0	5	0.06
12398	4	J-32	J-33	6	Ductile Iron	130	0	0	0
12401	236	J-550	J-32	6	Ductile Iron	130	0	-7	0.07
12402	1,024	J-502	J-550	6	Ductile Iron	130	0	-7	0.07
14458	206	J-561	J-476	8	Ductile Iron	130	0	21	0.13
14460	442	J-204	J-129	8	Ductile Iron	130	0	-4	0.02
14461	11	J-203	J-204	8	Ductile Iron	130	0	0	0
14462	7	J-128	J-129	6	Ductile Iron	130	0	0	0
14463	11	J-197	J-198	8	Ductile Iron	130	0	0	0
14465	447	J-565	J-561	8	Ductile Iron	130	0	30	0.19
14466	630	J-106	J-167	8	Ductile Iron	130	0	-8	0.05
14467	610	J-284	J-136	8	Ductile Iron	130	0	28	0.18
14477	525	J-624	J-533	6	Ductile Iron	130	0	-1	0.01
14478	694	J-27	J-425	8	Ductile Iron	130	0	-5	0.03
14479	657	J-639	J-640	6	Ductile Iron	130	0	-3	0.03
14481	658	J-641	J-642	6	Ductile Iron	130	0	-5	0.05
14483	8	J-179	J-180	8	Ductile Iron	130	0	0	0
14484	10	J-212	J-213	8	Ductile Iron	130	0	0	0
14485	5	J-81	J-82	6	Ductile Iron	130	0	0	0
14486	3	J-26	J-27	6	Ductile Iron	130	0	0	0
14487	3	J-24	J-25	6	Ductile Iron	130	0	0	0
14488	4	J-30	J-31	6	Ductile Iron	130	0	0	0
14494	1,330	J-646	J-501	6	Ductile Iron	130	0	5	0.06

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
14496	26	J-325	J-326	6	Ductile Iron	130	0	0	0
19501	5	J-23	J-24	16	Ductile Iron	130	0	0	0
19507	15	J-120	J-121	16	Ductile Iron	130	0	-26	0.04
19510	5	J-19	J-20	12	Ductile Iron	130	0	0	0
19511	5	J-17	J-18	12	Ductile Iron	130	0	0	0
19512	366	J-19	J-17	16	Ductile Iron	130	0	-26	0.04
19514	5	J-15	J-16	12	Ductile Iron	130	0	0	0
19515	413	J-15	J-298	16	Ductile Iron	130	0	-26	0.04
19516	88	J-298	J-185	16	Ductile Iron	130	0	-26	0.04
19517	25	J-185	J-186	16	Ductile Iron	130	0	-26	0.04
19520	39	J-186	J-231	16	Ductile Iron	130	0	-26	0.04
19522	25	J-189	J-190	12	Ductile Iron	130	0	-26	0.07
19526	2	J-7	J-8	0.8	Ductile Iron	130	0	0	0
19527	2	J-5	J-6	0.8	Ductile Iron	130	0	0	0
21371	649	J-385	J-400	16	Ductile Iron	130	0	-20	0.03
21372	659	J-426	J-421	16	Ductile Iron	130	0	-62	0.1
21374	349	J-439	J-432	16	Ductile Iron	130	0	-182	0.29
21395	53	J-428	J-429	6	Ductile Iron	130	0	0	0
21709	365	J-435	J-504	16	Ductile Iron	130	0	12	0.02
21710	85	J-496	J-355	16	Ductile Iron	130	0	6	0.01
21711	37	J-367	J-368	6	Ductile Iron	130	0	0	0
21712	13	J-232	J-233	6	Ductile Iron	130	0	0	0
21713	16	J-261	J-262	8	Ductile Iron	130	0	6	0.04
21714	4	J-4	J-5	6	Ductile Iron	130	0	6	0.06
21715	1	J-6	J-7	16	Ductile Iron	130	0	0	0
21716	6	J-115	J-116	6	Ductile Iron	130	0	-275	3.12
21717	1	J-1	J-3	16	Ductile Iron	130	0	0	0
21718	1	J-1	J-2	16	Ductile Iron	130	0	0	0
21719	26	J-323	J-324	6	Ductile Iron	130	0	0	0
21720	20	J-284	J-285	6	Ductile Iron	130	0	-27	0.3
21722	53	J-440	J-441	6	Ductile Iron	130	0	0	0
21723	38	J-369	J-370	6	Ductile Iron	130	0	0	0
21724	29	J-333	J-334	8	Ductile Iron	130	0	19	0.12
24188	60	J-458	J-459	6	Ductile Iron	130	0	0	0
24513	20	J-294	J-295	8	Ductile Iron	130	0	-1	0
24514	20	J-296	J-297	8	Ductile Iron	130	0	-2	0.01
24515	45	J-405	J-411	8	Ductile Iron	130	0	-1	0.01
24516	45	J-412	J-413	8	Ductile Iron	130	0	-2	0.01
24517	300	J-294	J-312	8	Ductile Iron	130	0	1	0
24518	303	J-296	J-479	8	Ductile Iron	130	0	2	0.01
24519	22	J-311	J-312	6	Ductile Iron	130	0	0	0
24520	74	J-479	J-480	8	Ductile Iron	130	0	2	0.01

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
25253	4	J-56	J-57	6	Ductile Iron	130	0	0	0
25254	6	J-36	J-37	6	Ductile Iron	130	0	-3	0.03
25255	6	J-87	J-88	6	Ductile Iron	130	0	0	0
25256	5	J-52	J-53	6	Ductile Iron	130	0	0	0
25257	5	J-65	J-66	6	Ductile Iron	130	0	0	0
25258	5	J-85	J-86	6	Ductile Iron	130	0	0	0
25283	7	J-154	J-155	4	Ductile Iron	130	0	0	0
25284	7	J-152	J-153	8	Ductile Iron	130	0	0	0
25565	445	J-107	J-13	8	Ductile Iron	130	0	-6	0.04
25566	6	J-107	J-108	6	Ductile Iron	130	0	0	0
25595	7	J-77	J-78	6	Ductile Iron	130	0	0	0
27024	49	J-254	J-255	16	Ductile Iron	130	0	26	0.04
27025	34	J-23	J-222	16	Ductile Iron	130	0	0	0
27504	117	J-393	J-162	8	Ductile Iron	130	0	0	0
27505	10	J-162	J-163	6	Ductile Iron	130	0	0	0
27906	504	J-281	J-505	8	Ductile Iron	130	0	1	0.01
27908	632	J-505	J-402	8	Ductile Iron	130	0	1	0.01
27909	12	J-199	J-200	6	Ductile Iron	130	0	0	0
28144	138	J-516	J-544	8	Ductile Iron	130	0	-2	0.01
29987	75	J-483	J-336	6	Ductile Iron	130	0	0	0
29988	30	J-336	J-337	6	Ductile Iron	130	0	0	0
30003	6	J-69	J-70	12	Ductile Iron	130	0	0	0
30004	115	J-526	J-462	8	Ductile Iron	130	0	0	0
30005	310	J-583	J-526	16	Ductile Iron	130	0	-19	0.03
30006	273	J-537	J-205	16	Ductile Iron	130	0	-25	0.04
30007	9	J-195	J-196	6	Ductile Iron	130	0	-7	0.07
30009	45	J-409	J-410	6	Ductile Iron	130	0	0	0
30010	683	J-205	J-643	16	Ductile Iron	130	0	-31	0.05
30011	647	J-643	J-22	16	Ductile Iron	130	0	-58	0.09
30012	3	J-22	J-23	12	Ductile Iron	130	0	17	0.05
30015	640	J-22	J-638	16	Ductile Iron	130	0	-74	0.12
30017	3	J-20	J-21	8	Ductile Iron	130	0	0	0
30021	617	J-635	J-484	16	Ductile Iron	130	0	-92	0.15
30023	21	J-292	J-293	6	Ductile Iron	130	0	0	0
30389	117	J-524	J-531	12	Ductile Iron	130	0	59	0.17
30390	19	J-252	J-253	6	Ductile Iron	130	0	0	0
30392	88	J-499	J-278	12	Ductile Iron	130	0	0	0
30393	435	J-599	J-607	16	Ductile Iron	130	0	-59	0.09
30394	14	J-259	J-260	6	Ductile Iron	130	0	0	0
30395	8	J-173	J-174	6	Ductile Iron	130	0	0	0
30397	358	J-598	J-509	16	Ductile Iron	130	0	-59	0.09
30398	98	J-509	J-510	6	Ductile Iron	130	0	0	0

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30399	398	J-509	J-346	16	Ductile Iron	130	0	-59	0.09
30400	105	J-346	J-518	16	Ductile Iron	130	0	-25	0.04
30401	102	J-513	J-514	6	Ductile Iron	130	0	0	0
40954	162	J-407	J-552	8	Ductile Iron	130	0	1	0.01
40955	166	J-511	J-412	8	Ductile Iron	130	0	-2	0.01
40956	54	J-407	J-408	6	Ductile Iron	130	0	0	0
40957	6	J-117	J-118	6	Ductile Iron	130	0	0	0
40958	19	J-286	J-287	6	Ductile Iron	130	0	0	0
44165	278	J-79	J-28	12	Ductile Iron	130	0	26	0.07
44167	5	J-79	J-80	6	Ductile Iron	130	0	0	0
44168	5	J-75	J-76	6	Ductile Iron	130	0	0	0
44169	8	J-35	J-170	6	Ductile Iron	130	0	0	0
45230	35	J-190	J-223	12	Ductile Iron	130	0	-26	0.07
45231	13	J-106	J-107	1	Ductile Iron	130	0	0	0
45232	8	J-67	J-68	6	Ductile Iron	130	0	0	0
45234	8	J-69	J-70	6	Ductile Iron	130	0	0	0
45236	22	J-165	J-166	12	Ductile Iron	130	0	-26	0.07
45237	293	J-166	J-363	12	Ductile Iron	130	0	-26	0.07
45238	10	J-81	J-82	6	Ductile Iron	130	0	0	0
45239	8	J-73	J-74	6	Ductile Iron	130	0	0	0
45241	22	J-168	J-169	12	Ductile Iron	130	0	-26	0.07
45242	148	J-169	J-296	12	Ductile Iron	130	0	-26	0.07
45245	10	J-77	J-78	6	Ductile Iron	130	0	0	0
45247	89	J-301	J-302	6	Ductile Iron	130	0	0	0
45248	106	J-321	J-246	8	Ductile Iron	130	0	30	0.19
45249	8	J-71	J-72	6	Ductile Iron	130	0	0	0
45251	13	J-101	J-102	1	Ductile Iron	130	0	0	0
45252	85	J-297	J-163	12	Ductile Iron	130	0	-56	0.16
45253	22	J-163	J-164	12	Ductile Iron	130	0	-56	0.16
45257	8	J-63	J-64	6	Ductile Iron	130	0	0	0
45260	5	J-21	J-22	1	Ductile Iron	130	0	0	0
45261	107	J-324	J-602	8	Ductile Iron	130	0	0	0
45262	8	J-65	J-66	6	Ductile Iron	130	0	0	0
45263	277	J-65	J-167	12	Ductile Iron	130	0	-56	0.16
45264	22	J-167	J-579	12	Ductile Iron	130	0	-56	0.16
45268	9	J-183	J-184	6	Ductile Iron	130	0	0	0
45271	5	J-73	J-74	1	Ductile Iron	130	0	0	0
45410	41	J-377	J-378	8	Ductile Iron	130	0	0	0
45970	15	J-264	J-265	6	Ductile Iron	130	0	3	0.03
45972	7	J-136	J-137	6	Ductile Iron	130	0	0	0
45973	37	J-365	J-366	6	Ductile Iron	130	0	0	0
45975	38	J-373	J-374	6	Ductile Iron	130	0	0	0

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
45998	55	J-61	J-266	8	Ductile Iron	130	0	0	0
45999	7	J-61	J-62	8	Ductile Iron	130	0	0	0
47269	114	J-512	J-227	8	Ductile Iron	130	0	30	0.19
47271	9	J-144	J-145	6	Ductile Iron	130	0	0	0
47272	140	J-144	J-181	8	Ductile Iron	130	0	30	0.19
47273	9	J-181	J-182	8	Ductile Iron	130	0	0	0
47274	60	J-181	J-460	8	Ductile Iron	130	0	0	0
47275	37	J-371	J-372	6	Ductile Iron	130	0	0	0
47276	93	J-371	J-500	8	Ductile Iron	130	0	12	0.08
47278	41	J-389	J-390	8	Ductile Iron	130	0	0	0
47279	672	J-389	J-547	8	Ductile Iron	130	0	11	0.07
47305	50	J-355	J-430	8	Ductile Iron	130	0	4	0.02
47310	52	J-435	J-40	8	Ductile Iron	130	0	0	0
47311	4	J-40	J-41	6	Ductile Iron	130	0	0	0
47325	96	J-398	J-504	8	Ductile Iron	130	0	0	0
47327	42	J-398	J-399	6	Ductile Iron	130	0	0	0
48023	23	J-177	J-178	6	Ductile Iron	130	0	0	0
48024	140	J-343	J-150	8	Ductile Iron	130	0	1	0.01
48025	20	J-150	J-151	8	Ductile Iron	130	0	1	0.01
48027	2	J-9	J-10	8	Ductile Iron	130	0	0	0
48028	16	J-125	J-126	6	Ductile Iron	130	0	0	0
48211	7	J-138	J-139	6	Ductile Iron	130	0	0	0
48212	7	J-140	J-141	6	Ductile Iron	130	0	0	0
48213	20	J-305	J-306	8	Ductile Iron	130	0	0	0
55557	98	J-276	J-277	12	Ductile Iron	130	0	6	0.02
55562	20	J-152	J-153	8	Ductile Iron	130	0	0	0
55563	19	J-142	J-143	6	Ductile Iron	130	0	0	0
55564	50	J-260	J-194	8	Ductile Iron	130	0	0	0
55565	18	J-137	J-138	8	Ductile Iron	130	0	0	0
55569	26	J-204	J-132	8	Ductile Iron	130	0	0	0
55570	17	J-131	J-132	8	Ductile Iron	130	0	0	0
55571	28	J-209	J-210	6	Ductile Iron	130	0	0	0
55572	26	J-202	J-203	8	Ductile Iron	130	0	0	0
55574	55	J-597	J-268	8	Ductile Iron	130	0	0	0
55575	26	J-195	J-196	8	Ductile Iron	130	0	0	0
55577	9	J-55	J-56	6	Ductile Iron	130	0	0	0
55578	8	J-49	J-50	6	Ductile Iron	130	0	0	0
55979	260	J-448	J-450	12	Ductile Iron	130	0	9	0.03
55980	56	J-450	J-451	8	Ductile Iron	130	0	0	0
55981	56	J-448	J-449	8	Ductile Iron	130	0	0	0
55982	8	J-134	J-135	6	Ductile Iron	130	0	0	0
55983	258	J-543	J-453	12	Ductile Iron	130	0	-6	0.02

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
55984	58	J-453	J-454	8	Ductile Iron	130	0	0	0
55985	10	J-160	J-161	99	Ductile Iron	130	0	0	0
55986	196	J-146	J-557	12	Ductile Iron	130	0	-6	0.02
55987	9	J-146	J-147	6	Ductile Iron	130	0	0	0
55988	63	J-469	J-470	8	Ductile Iron	130	0	0	0
55989	352	J-597	J-315	12	Ductile Iron	130	0	6	0.02
55990	63	J-315	J-466	8	Ductile Iron	130	0	0	0
55991	10	J-150	J-151	6	Ductile Iron	130	0	0	0
55992	69	J-276	J-375	12	Ductile Iron	130	0	0	0
55993	16	J-276	J-277	16	Ductile Iron	130	0	10	0.02
55994	510	J-276	J-623	16	Ductile Iron	130	0	-19	0.03
56000	304	J-239	J-272	16	Ductile Iron	130	0	-19	0.03
56001	67	J-272	J-232	12	Ductile Iron	130	0	0	0
56003	332	J-235	J-255	16	Ductile Iron	130	0	-26	0.04
56010	9	J-51	J-52	6	Ductile Iron	130	0	0	0
56014	9	J-53	J-54	6	Ductile Iron	130	0	0	0
56016	30	J-212	J-213	8	Ductile Iron	130	0	0	0
56018	32	J-214	J-215	8	Ductile Iron	130	0	0	0
56021	6	J-13	J-14	6	Ductile Iron	130	0	0	0
56023	8	J-43	J-44	6	Ductile Iron	130	0	0	0
56024	23	J-171	J-172	8	Ductile Iron	130	0	1	0.01
56025	21	J-157	J-154	8	Ductile Iron	130	0	0	0
56028	8	J-47	J-48	6	Ductile Iron	130	0	0	0
60881	220	J-498	J-562	8	Ductile Iron	130	0	-16	0.1
60885	31	J-340	J-341	6	Ductile Iron	130	0	0	0
64961	16	J-271	J-272	6	Ductile Iron	130	0	0	0
64963	6	J-123	J-124	99	Ductile Iron	130	0	-176	0.01
75508	481	J-262	J-613	8	Ductile Iron	130	0	3	0.02
76924	6	J-125	J-126	6	Ductile Iron	130	0	0	0
76925	34	J-356	J-357	6	Ductile Iron	130	0	3	0.03
89634	50	J-431	J-432	6	Ductile Iron	130	0	0	0
89638	55	J-298	J-444	16	Ductile Iron	130	0	10	0.02
89640	53	J-442	J-443	8	Ductile Iron	130	0	-6	0.04
89641	13	J-242	J-243	6	Ductile Iron	130	0	0	0
89642	14	J-256	J-240	6	Ductile Iron	130	0	0	0
89643	14	J-254	J-255	6	Ductile Iron	130	0	0	0
89644	32	J-349	J-350	16	Ductile Iron	130	0	-12	0.02
89646	9	J-187	J-188	16	Ductile Iron	130	0	11	0.02
90048	53	J-438	J-439	10	Ductile Iron	130	0	-49	0.2
96761	14	J-185	J-257	10	Ductile Iron	130	0	0	0
96762	9	J-185	J-186	10	Ductile Iron	130	0	0	0
98803	117	J-532	J-485	12	Ductile Iron	130	0	0	0



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
98804	1,475	J-532	J-667	12	Ductile Iron	130	0	0	0
98805	315	J-667	J-366	12	Ductile Iron	130	0	0	0
98806	944	J-366	J-627	12	Ductile Iron	130	0	0	0
98807	584	J-627	J-628	12	Ductile Iron	130	0	0	0
99201	13	J-186	J-239	12	Ductile Iron	130	0	0	0
99202	504	J-620	J-236	24	Ductile Iron	130	0	0	0
99203	26	J-239	J-236	12	Ductile Iron	130	0	0	0
99204	21	J-156	J-620	12	Ductile Iron	130	0	0	0
99205	19	J-235	J-236	1	Ductile Iron	130	0	0	0
105743	8	J-132	J-133	6	Ductile Iron	130	0	0	0
105756	9	J-142	J-143	6	Ductile Iron	130	0	0	0
105757	21	J-64	J-307	12	Ductile Iron	130	0	0	0
105758	123	J-307	J-537	12	Ductile Iron	130	0	0	0
105759	17	J-280	J-63	12	Ductile Iron	130	0	0	0
105760	5	J-63	J-64	12	Ductile Iron	130	0	0	0
105761	19	J-290	J-291	8	Ductile Iron	130	0	6	0.04
105762	61	J-462	J-463	8	Ductile Iron	130	0	0	0
105763	198	J-463	J-535	8	Ductile Iron	130	0	0	0
105765	120	J-535	J-164	8	Ductile Iron	130	0	0	0
105766	8	J-164	J-165	6	Ductile Iron	130	0	0	0
105767	349	J-164	J-596	8	Ductile Iron	130	0	0	0
141981	27	J-330	J-290	8	Ductile Iron	130	0	6	0.04
141982	121	J-330	J-536	8	Ductile Iron	130	0	-6	0.04
141984	44	J-403	J-404	6	Ductile Iron	130	0	0	0
141985	6	J-97	J-98	6	Ductile Iron	130	0	8	0.1
141986	6	J-95	J-96	6	Ductile Iron	130	0	0	0
141987	138	J-472	J-99	8	Ductile Iron	130	0	-2	0.01
141988	11	J-217	J-218	6	Ductile Iron	130	0	-2	0.03
141989	6	J-99	J-100	6	Ductile Iron	130	0	0	0
141990	227	J-498	J-467	6	Ductile Iron	130	0	4	0.04
141991	63	J-467	J-468	6	Ductile Iron	130	0	2	0.03
141994	5	J-83	J-84	6	Ductile Iron	130	0	0	0
141995	6	J-101	J-102	6	Ductile Iron	130	0	0	0
144879	5	J-67	J-68	16	Ductile Iron	130	0	0	0
158638	6	J-33	J-34	6	Ductile Iron	130	0	0	0
158639	43	J-244	J-245	6	Ductile Iron	130	0	0	0
158640	35	J-224	J-225	8	Ductile Iron	130	0	1	0.01
158649	26	J-193	J-194	8	Ductile Iron	130	0	0	0
158650	65	J-140	J-193	8	Ductile Iron	130	0	0	0
158651	18	J-139	J-140	8	Ductile Iron	130	0	0	0
158652	20	J-154	J-155	8	Ductile Iron	130	0	0	0
158653	25	J-191	J-192	6	Ductile Iron	130	0	0	0

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
158654	148	J-155	J-200	8	Ductile Iron	130	0	0	0
158655	26	J-200	J-201	8	Ductile Iron	130	0	0	0
159024	35	J-226	J-227	8	Ductile Iron	130	0	1	0.01
159026	11	J-85	J-86	6	Ductile Iron	130	0	0	0
174392	80	J-491	J-492	8	Ductile Iron	130	0	0	0
174802	41	J-395	J-396	4	Ductile Iron	130	0	0	0
174803	27	J-155	J-327	4	Ductile Iron	130	0	0	0
189468	7	J-148	J-149	6	Ductile Iron	130	0	0	0
189469	131	J-279	J-130	12	Ductile Iron	130	0	0	0
189470	6	J-130	J-131	12	Ductile Iron	130	0	0	0
189472	197	J-559	J-437	12	Ductile Iron	130	0	-3	0.01
189473	16	J-273	J-274	6	Ductile Iron	130	0	0	0
189474	53	J-437	J-361	12	Ductile Iron	130	0	-3	0.01
189475	36	J-361	J-362	12	Ductile Iron	130	0	-3	0.01
189476	197	J-362	J-558	12	Ductile Iron	130	0	-6	0.02
189477	6	J-91	J-92	4	Ductile Iron	130	0	0	0
198398	147	J-417	J-286	8	Ductile Iron	130	0	1	0.01
203870	6	J-2	J-19	16	Ductile Iron	130	0	-26	0.04
203871	1	J-1	J-2	8	Ductile Iron	130	0	0	0
213052	70	J-475	J-219	8	Ductile Iron	130	0	4	0.02
213053	11	J-219	J-220	6	Ductile Iron	130	0	0	0
213054	388	J-219	J-418	8	Ductile Iron	130	0	2	0.02
213055	47	J-418	J-419	8	Ductile Iron	130	0	0	0
225318	10	J-196	J-205	6	Ductile Iron	130	0	-7	0.07
228582	4	J-34	J-35	8	Ductile Iron	130	0	3	0.02
228583	329	J-594	J-34	8	Ductile Iron	130	0	3	0.02
229343	12	J-12	J-234	12	Ductile Iron	130	0	19	0.05
229344	4	J-28	J-29	8	Ductile Iron	130	0	26	0.16
229345	6	J-29	J-10	8	Ductile Iron	130	0	26	0.16
229346	2	J-10	J-11	12	Ductile Iron	130	0	19	0.05
229347	2	J-11	J-12	12	Ductile Iron	130	0	19	0.05
239091	40	J-232	J-233	12	Ductile Iron	130	0	0	0
239094	15	J-243	J-263	6	Ductile Iron	130	0	0	0
239098	13	J-240	J-241	6	Ductile Iron	130	0	0	0
239099	20	J-255	J-299	6	Ductile Iron	130	0	0	0
239483	168	J-552	J-117	8	Ductile Iron	130	0	1	0.01
239484	116	J-471	J-511	8	Ductile Iron	130	0	-2	0.01
239485	44	J-405	J-406	8	Ductile Iron	130	0	1	0.01
239487	158	J-536	J-404	8	Ductile Iron	130	0	-6	0.04
239884	557	J-573	J-617	8	Ductile Iron	130	0	-14	0.09
239886	455	J-610	J-394	8	Ductile Iron	130	0	-16	0.1
239888	37	J-363	J-364	12	Ductile Iron	130	0	-20	0.06

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
240694	84	J-406	J-407	8	Ductile Iron	130	0	1	0.01
240695	46	J-117	J-417	8	Ductile Iron	130	0	1	0.01
240696	69	J-286	J-471	8	Ductile Iron	130	0	-2	0.01
240697	441	J-483	J-107	8	Ductile Iron	130	0	-1	0.01
240700	70	J-472	J-473	8	Ductile Iron	130	0	-12	0.08
240701	101	J-99	J-217	8	Ductile Iron	130	0	-2	0.01
240702	199	J-526	J-475	16	Ductile Iron	130	0	-19	0.03
240703	164	J-475	J-537	16	Ductile Iron	130	0	-23	0.04
241094	155	J-547	J-477	8	Ductile Iron	130	0	10	0.06
241095	254	J-572	J-79	12	Ductile Iron	130	0	31	0.09
241097	229	J-565	J-106	8	Ductile Iron	130	0	-4	0.03
241098	453	J-167	J-609	8	Ductile Iron	130	0	-11	0.07
241101	204	J-560	J-204	8	Ductile Iron	130	0	-1	0.01
241104	61	J-461	J-371	8	Ductile Iron	130	0	12	0.08
241105	54	J-371	J-436	8	Ductile Iron	130	0	0	0
241106	102	J-181	J-461	8	Ductile Iron	130	0	30	0.19
241109	49	J-227	J-144	8	Ductile Iron	130	0	30	0.19
241111	44	J-246	J-247	8	Ductile Iron	130	0	30	0.19
241115	849	J-52	J-88	8	Ductile Iron	130	0	8	0.05
241117	572	J-632	J-633	8	Ductile Iron	130	0	11	0.07
241118	579	J-632	J-213	8	Ductile Iron	130	0	-16	0.1
241121	22	J-314	J-315	8	Ductile Iron	130	0	0	0
241122	226	J-557	J-469	12	Ductile Iron	130	0	-6	0.02
241123	116	J-453	J-146	12	Ductile Iron	130	0	-6	0.02
241127	443	J-444	J-608	16	Ductile Iron	130	0	10	0.02
241128	303	J-78	J-442	8	Ductile Iron	130	0	-6	0.04
241131	268	J-193	J-580	16	Ductile Iron	130	0	-12	0.02
241136	592	J-585	J-27	8	Ductile Iron	130	0	0	0
241137	269	J-446	J-385	16	Ductile Iron	130	0	-11	0.02
241139	125	J-533	J-534	6	Ductile Iron	130	0	-1	0.01
241142	45	J-400	J-416	16	Ductile Iron	130	0	-40	0.06
241145	265	J-519	J-333	16	Ductile Iron	130	0	-86	0.14
241146	323	J-370	J-397	16	Ductile Iron	130	0	-106	0.17
241147	42	J-397	J-285	16	Ductile Iron	130	0	-106	0.17
241148	465	J-285	J-439	16	Ductile Iron	130	0	-133	0.21
241494	292	J-432	J-546	16	Ductile Iron	130	0	-182	0.29
241495	150	J-546	J-323	16	Ductile Iron	130	0	-182	0.29
241496	69	J-323	J-1	16	Ductile Iron	130	0	-182	0.29
241497	32	J-1	J-346	16	Ductile Iron	130	0	-182	0.29
241498	99	J-346	J-414	16	Ductile Iron	130	0	-216	0.34
241499	45	J-414	J-415	16	Ductile Iron	130	0	-216	0.34
241500	94	J-501	J-502	6	Ductile Iron	130	0	-7	0.07

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
241502	487	J-501	J-614	6	Ductile Iron	130	0	12	0.13
242703	326	J-592	J-593	6	Ductile Iron	130	0	-6	0.07
243096	18	J-281	J-16	16	Ductile Iron	130	0	2	0
243097	33	J-355	J-281	16	Ductile Iron	130	0	2	0
243100	127	J-504	J-233	16	Ductile Iron	130	0	12	0.02
243101	392	J-506	J-562	16	Ductile Iron	130	0	59	0.09
243898	52	J-434	J-38	8	Ductile Iron	130	0	0	0
243899	4	J-38	J-39	6	Ductile Iron	130	0	0	0
243900	60	J-457	J-42	8	Ductile Iron	130	0	0	0
243901	4	J-42	J-43	6	Ductile Iron	130	0	0	0
247576	10	J-13	J-214	8	Ductile Iron	130	0	-9	0.06
247577	2	J-13	J-14	6	Ductile Iron	130	0	0	0
247937	3	J-14	J-19	6	Ductile Iron	130	0	0	0
P-1	205	J-643	J-380	8	Ductile Iron	130	0	26	0.17
P-2	520	J-380	J-381	8	Ductile Iron	130	0	11	0.07
P-3	283	J-381	J-382	8	Ductile Iron	130	0	7	0.05
P-4	531	J-382	J-383	8	Ductile Iron	130	0	3	0.02
P-5	423	J-383	J-384	8	Ductile Iron	130	0	-5	0.03
P-6	283	J-384	J-385	8	Ductile Iron	130	0	-8	0.05
P-7	434	J-385	J-380	8	Ductile Iron	130	0	-11	0.07
P-10	155	J-383	J-386	8	Ductile Iron	130	0	3	0.02
P-11	501	J-593	J-387	6	Ductile Iron	130	0	-6	0.07
P-12	462	J-387	J-441	6	Ductile Iron	130	0	-8	0.1
P-15	655	J-363	J-389	8	Ductile Iron	130	0	11	0.07
P-16	635	J-389	J-588	8	Ductile Iron	130	0	8	0.05
P-31	31	R-2	PMP-2	99	Ductile Iron	130	0	275	0.01
P-32	42	PMP-2	J-116	99	Ductile Iron	130	0	275	0.01
P-34	72	R-3	PMP-3	99	Ductile Iron	130	0	0	0
P-35	80	PMP-3	J-161	99	Ductile Iron	130	0	0	0
P-36	26	R-1	PMP-1	99	Ductile Iron	130	0	176	0.01
P-37	25	PMP-1	J-124	99	Ductile Iron	130	0	176	0.01
P-38	45	J-350	J-401	16	Ductile Iron	130	0	-12	0.02
P-39	18	J-401	J-188	16	Ductile Iron	130	0	-11	0.02
P-41	336	J-401	J-673	6	Ductile Iron	130	0	0	0
P-44	1	J-321	J-365	12	Ductile Iron	130	0	-42	0.12
P-47	379	J-237	J-235	16	Ductile Iron	130	0	-26	0.04
P-49	182	J-250	J-237	16	Ductile Iron	130	0	-26	0.04
P-50	242	J-272	J-229	16	Ductile Iron	130	0	-26	0.04
P-51	133	J-229	J-250	16	Ductile Iron	130	0	-26	0.04
P-53	186	J-242	J-239	16	Ductile Iron	130	0	-19	0.03
P-54	200	J-623	J-129	16	Ductile Iron	130	0	-19	0.03
P-55	115	J-129	J-242	16	Ductile Iron	130	0	-19	0.03

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-56	138	J-15	J-332	16	Ductile Iron	130	0	26	0.04
P-58	5	J-332	J-284	16	Ductile Iron	130	0	26	0.04
P-59	290	J-284	J-17	16	Ductile Iron	130	0	26	0.04
P-62	5	J-287	J-336	16	Ductile Iron	130	0	-26	0.04
P-63	658	J-336	J-2	16	Ductile Iron	130	0	-26	0.04
P-65	11	J-365	J-370	16	Ductile Iron	130	0	-106	0.17
P-74	54	J-326	J-430	6	Ductile Iron	130	0	2	0.02
P-75	644	J-430	J-367	6	Ductile Iron	130	0	5	0.06
P-78	4	J-15	J-94	16	Ductile Iron	130	0	0	0
P-85	17	J-378	J-325	12	Ductile Iron	130	0	-56	0.16
P-87	1	J-321	J-365	8	Ductile Iron	130	0	-14	0.09
P-90	70	J-296	J-322	12	Ductile Iron	130	0	-26	0.07
P-92	187	J-164	J-293	12	Ductile Iron	130	0	-56	0.16
P-93	49	J-293	J-378	12	Ductile Iron	130	0	-56	0.16
P-96	512	J-626	J-321	30	Ductile Iron	130	0	88	0.04
P-97	39	J-321	J-67	30	Ductile Iron	130	0	92	0.04
P-98	18	J-484	J-292	16	Ductile Iron	130	0	-92	0.15
P-99	62	J-292	J-382	16	Ductile Iron	130	0	-92	0.15
P-106	503	J-447	J-630	8	Ductile Iron	130	0	18	0.12
P-107	30	J-630	J-625	8	Ductile Iron	130	0	13	0.08
P-108	12	J-185	J-628	8	Ductile Iron	130	0	0	0
P-109	3	J-628	J-266	8	Ductile Iron	130	0	0	0
P-110	11	J-605	J-138	8	Ductile Iron	130	0	3	0.02
P-111	409	J-138	J-606	8	Ductile Iron	130	0	3	0.02
P-112	641	J-65	J-590	8	Ductile Iron	130	0	17	0.11
P-113	297	J-590	J-52	8	Ductile Iron	130	0	13	0.08
P-115	24	J-372	J-312	8	Ductile Iron	130	0	0	0
P-117	6	J-343	J-340	8	Ductile Iron	130	0	0	0
P-121	46	J-291	J-583	16	Ductile Iron	130	0	-19	0.03
P-123	26	J-568	J-581	16	Ductile Iron	130	0	43	0.07
P-124	206	J-638	J-578	16	Ductile Iron	130	0	-74	0.12
P-125	433	J-578	J-20	16	Ductile Iron	130	0	-83	0.13
P-126	56	J-476	J-572	8	Ductile Iron	130	0	21	0.13
P-127	14	J-572	J-477	6	Ductile Iron	130	0	-10	0.12
P-128	5	J-322	J-355	12	Ductile Iron	130	0	-26	0.07
P-130	237	J-416	J-391	16	Ductile Iron	130	0	-40	0.06
P-131	10	J-391	J-571	16	Ductile Iron	130	0	-40	0.06
P-133	45	J-324	J-65	12	Ductile Iron	130	0	-56	0.16
P-134	561	J-562	J-6	16	Ductile Iron	130	0	43	0.07
P-135	4	J-6	J-568	16	Ductile Iron	130	0	43	0.07
P-146	662	J-616	J-37	8	Ductile Iron	130	0	-8	0.05
P-147	104	J-37	J-651	8	Ductile Iron	130	0	-11	0.07

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-148	17	J-393	J-339	8	Ductile Iron	130	0	16	0.1
P-149	24	J-339	J-394	8	Ductile Iron	130	0	16	0.1
P-150	73	J-633	J-190	8	Ductile Iron	130	0	8	0.05
P-151	617	J-190	J-648	8	Ductile Iron	130	0	5	0.03
P-152	52	J-32	J-195	6	Ductile Iron	130	0	-7	0.07
P-154	92	J-205	J-409	8	Ductile Iron	130	0	0	0
P-155	23	J-409	J-528	8	Ductile Iron	130	0	0	0
P-156	720	J-649	J-143	12	Ductile Iron	130	0	0	0
P-157	2	J-143	J-280	12	Ductile Iron	130	0	0	0
P-158	545	J-629	J-306	8	Ductile Iron	130	0	-3	0.02
P-159	18	J-306	J-630	6	Ductile Iron	130	0	-3	0.03
P-163	287	J-395	J-661	30	Ductile Iron	130	0	88	0.04
P-164	82	J-619	J-254	16	Ductile Iron	130	0	-12	0.02
P-165	465	J-254	J-349	16	Ductile Iron	130	0	-12	0.02
P-166	207	J-617	J-216	8	Ductile Iron	130	0	-16	0.1
P-167	293	J-216	J-618	8	Ductile Iron	130	0	-16	0.1
P-170	6	J-291	J-21	12	Ductile Iron	130	0	-56	0.16
P-171	61	J-21	J-324	12	Ductile Iron	130	0	-56	0.16
P-172	281	J-524	J-252	16	Ductile Iron	130	0	-59	0.09
P-173	90	J-252	J-599	16	Ductile Iron	130	0	-59	0.09
P-175	137	J-173	J-598	16	Ductile Iron	130	0	-59	0.09
P-176	44	J-597	J-49	12	Ductile Iron	130	0	-4	0.01
P-180	264	J-132	J-195	12	Ductile Iron	130	0	2	0.01
P-181	72	J-195	J-597	12	Ductile Iron	130	0	2	0.01
P-184	177	J-10	J-75	8	Ductile Iron	130	0	7	0.05
P-185	159	J-75	J-594	8	Ductile Iron	130	0	3	0.02
P-186	47	J-334	J-377	8	Ductile Iron	130	0	19	0.12
P-187	8	J-377	J-447	8	Ductile Iron	130	0	19	0.12
P-188	16	J-422	J-85	8	Ductile Iron	130	0	25	0.16
P-189	733	J-85	J-65	8	Ductile Iron	130	0	21	0.14
P-192	208	J-277	J-212	12	Ductile Iron	130	0	2	0.01
P-194	136	J-172	J-177	8	Ductile Iron	130	0	1	0.01
P-195	25	J-177	J-343	8	Ductile Iron	130	0	1	0.01
P-198	42	J-582	J-356	8	Ductile Iron	130	0	18	0.11
P-199	270	J-356	J-389	8	Ductile Iron	130	0	15	0.09
P-200	111	J-579	J-491	12	Ductile Iron	130	0	-56	0.16
P-201	157	J-491	J-487	12	Ductile Iron	130	0	-56	0.16
P-202	434	J-129	J-198	8	Ductile Iron	130	0	-6	0.04
P-203	19	J-198	J-561	8	Ductile Iron	130	0	-6	0.04
P-204	99	J-606	J-141	8	Ductile Iron	130	0	1	0.01
P-205	334	J-141	J-547	8	Ductile Iron	130	0	0	0
P-206	433	J-608	J-443	16	Ductile Iron	130	0	-5	0.01

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-207	44	J-443	J-563	16	Ductile Iron	130	0	-12	0.02
P-210	56	J-498	J-340	8	Ductile Iron	130	0	12	0.08
P-211	30	J-340	J-473	8	Ductile Iron	130	0	12	0.08
P-212	7	J-468	J-101	6	Ductile Iron	130	0	2	0.03
P-213	84	J-101	J-345	6	Ductile Iron	130	0	2	0.03
P-214	16	J-218	J-83	6	Ductile Iron	130	0	-2	0.03
P-215	16	J-83	J-345	6	Ductile Iron	130	0	-2	0.03
P-216	25	J-404	J-97	8	Ductile Iron	130	0	-6	0.04
P-218	32	J-97	J-95	8	Ductile Iron	130	0	-14	0.09
P-219	117	J-95	J-472	8	Ductile Iron	130	0	-14	0.09
P-220	18	J-415	J-115	16	Ductile Iron	130	0	-216	0.34
P-221	79	J-115	J-506	16	Ductile Iron	130	0	59	0.09
P-222	125	J-450	J-160	12	Ductile Iron	130	0	-6	0.02
P-223	13	J-160	J-543	12	Ductile Iron	130	0	-6	0.02
P-224	10	J-383	J-123	8	Ductile Iron	130	0	-174	1.11
P-225	30	J-123	J-384	8	Ductile Iron	130	0	2	0.01
P-226	34	J-212	J-331	12	Ductile Iron	130	0	2	0.01
P-228	176	J-331	J-214	12	Ductile Iron	130	0	2	0.01
P-230	85	J-214	J-13	12	Ductile Iron	130	0	2	0.01
P-231	168	J-13	J-375	12	Ductile Iron	130	0	2	0.01
P-235	55	J-301	J-321	12	Ductile Iron	130	0	-26	0.07
P-236	562	J-49	J-55	12	Ductile Iron	130	0	-4	0.01
P-237	37	J-55	J-277	12	Ductile Iron	130	0	-4	0.01
P-240	321	J-282	J-53	12	Ductile Iron	130	0	6	0.02
P-241	454	J-53	J-276	12	Ductile Iron	130	0	6	0.02
P-243	35	J-81	J-165	12	Ductile Iron	130	0	-26	0.07
P-245	153	J-69	J-349	12	Ductile Iron	130	0	-26	0.07
P-246	80	J-349	J-370	12	Ductile Iron	130	0	-26	0.07
P-247	91	J-370	J-81	12	Ductile Iron	130	0	-26	0.07
P-252	80	J-326	J-61	8	Ductile Iron	130	0	30	0.19
P-253	27	J-61	J-512	8	Ductile Iron	130	0	30	0.19
P-254	46	J-231	J-327	16	Ductile Iron	130	0	-26	0.04
P-255	18	J-327	J-189	16	Ductile Iron	130	0	-26	0.04
P-256	3	J-518	J-513	16	Ductile Iron	130	0	-25	0.04
P-257	228	J-513	J-291	16	Ductile Iron	130	0	-25	0.04
P-259	121	J-197	J-282	12	Ductile Iron	130	0	6	0.02
P-261	19	J-375	J-226	8	Ductile Iron	130	0	1	0.01
P-262	34	J-227	J-86	8	Ductile Iron	130	0	1	0.01
P-266	22	J-478	J-295	12	Ductile Iron	130	0	-3	0.01
P-267	6	J-295	J-297	12	Ductile Iron	130	0	-4	0.01
P-268	60	J-201	J-191	8	Ductile Iron	130	0	0	0
P-269	237	J-191	J-139	8	Ductile Iron	130	0	0	0

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-277	58	J-244	J-224	8	Ductile Iron	130	0	1	0.01
P-278	29	J-225	J-367	8	Ductile Iron	130	0	1	0.01
P-279	23	J-367	J-262	8	Ductile Iron	130	0	0	0
P-280	340	J-86	J-33	8	Ductile Iron	130	0	1	0.01
P-281	110	J-33	J-244	8	Ductile Iron	130	0	1	0.01
P-283	156	J-209	J-132	12	Ductile Iron	130	0	2	0.01
P-284	140	J-367	J-202	12	Ductile Iron	130	0	2	0.01
P-285	45	J-202	J-209	12	Ductile Iron	130	0	2	0.01
P-286	201	J-297	J-459	12	Ductile Iron	130	0	-6	0.02
P-288	16	J-459	J-413	12	Ductile Iron	130	0	-6	0.02
P-289	4	J-413	J-411	12	Ductile Iron	130	0	-7	0.02
P-290	95	J-233	J-457	16	Ductile Iron	130	0	12	0.02
P-291	195	J-457	J-261	16	Ductile Iron	130	0	12	0.02
P-292	38	J-421	J-456	16	Ductile Iron	130	0	-86	0.14
P-293	69	J-456	J-519	16	Ductile Iron	130	0	-86	0.14
P-294	36	J-333	J-373	16	Ductile Iron	130	0	-105	0.17
P-295	875	J-373	J-365	16	Ductile Iron	130	0	-105	0.17
P-300	190	J-261	J-434	16	Ductile Iron	130	0	6	0.01
P-301	77	J-434	J-496	16	Ductile Iron	130	0	6	0.01
P-302	20	J-187	J-428	16	Ductile Iron	130	0	-11	0.02
P-303	40	J-428	J-446	16	Ductile Iron	130	0	-11	0.02
P-304	310	J-571	J-423	16	Ductile Iron	130	0	-40	0.06
P-309	214	J-270	J-373	12	Ductile Iron	130	0	0	0
P-310	32	J-423	J-387	16	Ductile Iron	130	0	-40	0.06
P-311	23	J-387	J-426	16	Ductile Iron	130	0	-40	0.06
P-312	184	J-151	J-125	8	Ductile Iron	130	0	1	0.01
P-314	65	J-157	J-171	12	Ductile Iron	130	0	1	0
P-315	137	J-171	J-372	12	Ductile Iron	130	0	0	0
P-316	16	J-153	J-143	12	Ductile Iron	130	0	1	0
P-317	32	J-143	J-156	12	Ductile Iron	130	0	1	0
P-318	100	J-353	J-101	12	Ductile Iron	130	0	-26	0.07
P-319	149	J-101	J-301	12	Ductile Iron	130	0	-26	0.07
P-330	274	J-272	J-181	12	Ductile Iron	130	0	6	0.02
P-332	80	J-181	J-51	12	Ductile Iron	130	0	6	0.02
P-333	67	J-51	J-197	12	Ductile Iron	130	0	6	0.02
P-334	33	J-464	J-154	30	Ductile Iron	130	0	88	0.04
P-336	10	J-154	J-152	30	Ductile Iron	130	0	88	0.04
P-337	708	J-152	J-395	30	Ductile Iron	130	0	88	0.04
P-338	154	J-363	J-73	12	Ductile Iron	130	0	-26	0.07
P-339	246	J-73	J-168	12	Ductile Iron	130	0	-26	0.07
P-340	89	J-156	J-137	12	Ductile Iron	130	0	1	0
P-341	185	J-137	J-367	12	Ductile Iron	130	0	1	0

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-342	51	J-365	J-71	12	Ductile Iron	130	0	-56	0.16
P-343	145	J-71	J-297	12	Ductile Iron	130	0	-56	0.16
P-348	5	J-223	J-106	12	Ductile Iron	130	0	-26	0.07
P-350	10	J-106	J-67	12	Ductile Iron	130	0	-26	0.07
P-351	263	J-67	J-69	12	Ductile Iron	130	0	-26	0.07
P-352	15	J-277	J-282	16	Ductile Iron	130	0	10	0.02
P-353	5	J-282	J-298	16	Ductile Iron	130	0	10	0.02
P-354	72	J-276	J-134	12	Ductile Iron	130	0	9	0.03
P-355	21	J-134	J-448	12	Ductile Iron	130	0	9	0.03
P-357	88	J-273	J-559	12	Ductile Iron	130	0	-3	0.01
P-358	583	J-364	J-271	12	Ductile Iron	130	0	-20	0.06
P-360	7	J-558	J-264	12	Ductile Iron	130	0	-8	0.02
P-362	73	J-563	J-242	16	Ductile Iron	130	0	-12	0.02
P-363	149	J-242	J-193	16	Ductile Iron	130	0	-12	0.02
P-364	173	J-607	J-259	16	Ductile Iron	130	0	-59	0.09
P-365	180	J-259	J-173	16	Ductile Iron	130	0	-59	0.09
P-366	82	J-580	J-256	16	Ductile Iron	130	0	-12	0.02
P-367	418	J-256	J-619	16	Ductile Iron	130	0	-12	0.02
P-368	4	J-24	J-7	16	Ductile Iron	130	0	-26	0.04
P-369	20	J-7	J-120	16	Ductile Iron	130	0	-26	0.04
P-370	49	J-355	J-77	12	Ductile Iron	130	0	-26	0.07
P-371	186	J-77	J-353	12	Ductile Iron	130	0	-26	0.07
P-372	155	J-375	J-43	12	Ductile Iron	130	0	1	0
P-373	119	J-43	J-157	12	Ductile Iron	130	0	1	0
P-374	56	J-325	J-63	12	Ductile Iron	130	0	-56	0.16
P-375	392	J-63	J-291	12	Ductile Iron	130	0	-56	0.16
P-376	22	J-402	J-200	8	Ductile Iron	130	0	1	0.01
P-377	1,316	J-200	J-516	8	Ductile Iron	130	0	1	0.01
P-378	69	J-372	J-47	12	Ductile Iron	130	0	0	0
P-379	87	J-47	J-270	12	Ductile Iron	130	0	0	0
P-380	207	J-487	J-183	12	Ductile Iron	130	0	-56	0.16
P-381	301	J-183	J-489	12	Ductile Iron	130	0	-59	0.17
P-382	731	J-213	J-180	8	Ductile Iron	130	0	-21	0.13
P-383	19	J-180	J-427	8	Ductile Iron	130	0	-24	0.16
P-384	19	J-315	J-150	12	Ductile Iron	130	0	6	0.02
P-385	164	J-150	J-469	12	Ductile Iron	130	0	6	0.02
P-386	200	J-121	J-5	16	Ductile Iron	130	0	-26	0.04
P-387	399	J-5	J-287	16	Ductile Iron	130	0	-26	0.04
P-388	6	J-278	J-148	12	Ductile Iron	130	0	0	0
P-389	11	J-148	J-279	12	Ductile Iron	130	0	0	0
P-390	52	J-131	J-91	12	Ductile Iron	130	0	0	0
P-391	77	J-91	J-273	12	Ductile Iron	130	0	0	0

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-392	213	J-662	J-133	12	Ductile Iron	130	0	0	0
P-393	833	J-133	J-649	12	Ductile Iron	130	0	0	0
P-394	146	J-461	J-125	8	Ductile Iron	130	0	18	0.11
P-395	128	J-125	J-582	8	Ductile Iron	130	0	18	0.11
P-396	341	J-125	J-9	8	Ductile Iron	130	0	1	0.01
P-397	20	J-9	J-153	8	Ductile Iron	130	0	1	0.01
P-398	23	J-425	J-82	8	Ductile Iron	130	0	-9	0.06
P-399	26	J-82	J-386	8	Ductile Iron	130	0	-9	0.06
P-400	257	J-489	J-73	12	Ductile Iron	130	0	-59	0.17
P-401	74	J-73	J-531	12	Ductile Iron	130	0	-59	0.17
P-402	8	J-615	J-57	8	Ductile Iron	130	0	0	0
P-403	489	J-57	J-616	8	Ductile Iron	130	0	0	0
P-404	581	J-651	J-31	8	Ductile Iron	130	0	-13	0.09
P-405	643	J-31	J-520	8	Ductile Iron	130	0	-18	0.12
P-406	88	J-520	J-25	8	Ductile Iron	130	0	-22	0.14
P-407	24	J-25	J-401	8	Ductile Iron	130	0	-22	0.14
P-410	91	J-247	J-91	8	Ductile Iron	130	0	30	0.19
P-411	62	J-91	J-326	8	Ductile Iron	130	0	30	0.19
P-412	2	J-600	J-284	6	Ductile Iron	130	0	-5	0.05
P-414	2	J-284	J-600	6	Ductile Iron	130	0	5	0.05
P-415	372	J-600	J-441	6	Ductile Iron	130	0	8	0.1
P-416	822	J-614	J-284	6	Ductile Iron	130	0	11	0.12
P-417	2	J-284	J-652	6	Ductile Iron	130	0	0	0
P-418	47	J-263	J-24	16	Ductile Iron	130	0	0	0
P-419	5	J-24	J-254	16	Ductile Iron	130	0	26	0.04
P-435	17	J-400	J-534	8	Ductile Iron	130	0	20	0.13
P-437	1	J-534	J-639	6	Ductile Iron	130	0	19	0.21
P-438	27	J-639	J-401	8	Ductile Iron	130	0	22	0.14
P-441	17	J-426	J-640	8	Ductile Iron	130	0	23	0.14
P-443	1	J-640	J-641	6	Ductile Iron	130	0	20	0.22
P-444	32	J-641	J-427	8	Ductile Iron	130	0	24	0.16
P-445	14	J-421	J-642	8	Ductile Iron	130	0	24	0.15
P-447	1	J-642	J-592	6	Ductile Iron	130	0	19	0.22
P-448	34	J-592	J-422	8	Ductile Iron	130	0	25	0.16
P-449	17	J-385	J-673	8	Ductile Iron	130	0	8	0.05
P-451	1	J-673	J-624	6	Ductile Iron	130	0	8	0.09
P-452	24	J-624	J-386	8	Ductile Iron	130	0	9	0.06
P-453	24	J-321	J-69	12	Ductile Iron	130	0	-3	0.01
P-454	5	J-69	J-322	12	Ductile Iron	130	0	-3	0.01
P-457	90	J-581	J-4	16	Ductile Iron	130	0	39	0.06
P-459	269	J-465	J-383	12	Ductile Iron	130	0	-104	0.3
P-460	341	J-383	J-348	12	Ductile Iron	130	0	70	0.2

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-462	69	J-271	J-404	12	Ductile Iron	130	0	-24	0.07
P-463	312	J-404	J-664	12	Ductile Iron	130	0	-44	0.12
P-464	82	J-4	J-405	16	Ductile Iron	130	0	34	0.05
P-465	98	J-405	J-435	16	Ductile Iron	130	0	15	0.02
P-470	1,291	J-544	J-406	8	Ductile Iron	130	0	11	0.07
P-474	641	J-403	J-407	8	Ductile Iron	130	0	11	0.07
P-475	22	J-20	J-408	16	Ductile Iron	130	0	-83	0.13
P-476	601	J-408	J-635	16	Ductile Iron	130	0	-92	0.15
P-477	348	J-214	J-408	8	Ductile Iron	130	0	-9	0.06
P-479	776	J-409	J-405	8	Ductile Iron	130	0	-19	0.12
P-480	601	J-409	J-410	8	Ductile Iron	130	0	5	0.03
P-481	378	J-648	J-411	8	Ductile Iron	130	0	2	0.02
P-482	328	J-411	J-88	8	Ductile Iron	130	0	2	0.02
P-483	52	J-136	J-412	8	Ductile Iron	130	0	26	0.16
P-484	372	J-412	J-565	8	Ductile Iron	130	0	26	0.16
P-485	426	J-412	J-413	8	Ductile Iron	130	0	0	0
P-486	458	J-625	J-609	8	Ductile Iron	130	0	13	0.08
P-487	20	J-264	J-414	12	Ductile Iron	130	0	-11	0.03
P-488	218	J-414	J-234	12	Ductile Iron	130	0	-13	0.04
P-489	685	J-414	J-415	8	Ductile Iron	130	0	2	0.01
P-490	245	J-605	J-416	8	Ductile Iron	130	0	-7	0.05
P-493	344	J-418	J-419	8	Ductile Iron	130	0	-7	0.05
P-494	363	J-419	J-88	8	Ductile Iron	130	0	-7	0.05
P-495	506	J-416	J-418	8	Ductile Iron	130	0	-7	0.05
P-496	136	J-664	J-421	12	Ductile Iron	130	0	-46	0.13
P-497	191	J-421	J-348	12	Ductile Iron	130	0	-48	0.14
P-498	618	J-404	J-422	8	Ductile Iron	130	0	20	0.13
P-499	666	J-422	J-407	8	Ductile Iron	130	0	15	0.09
P-501	652	J-423	J-23	8	Ductile Iron	130	0	-15	0.1
P-502	482	J-406	J-424	8	Ductile Iron	130	0	-5	0.03
P-503	221	J-424	J-423	8	Ductile Iron	130	0	-9	0.06
P-505	266	J-425	J-406	8	Ductile Iron	130	0	8	0.05
P-506	619	J-407	J-426	8	Ductile Iron	130	0	21	0.14
P-507	419	J-426	J-425	8	Ductile Iron	130	0	12	0.08
P-508	571	J-406	J-427	8	Ductile Iron	130	0	16	0.1
P-510	468	J-427	J-428	8	Ductile Iron	130	0	7	0.05
P-513	344	J-429	J-409	8	Ductile Iron	130	0	-14	0.09
P-514	221	J-428	J-430	8	Ductile Iron	130	0	0	0
P-515	245	J-430	J-429	8	Ductile Iron	130	0	-6	0.04
P-520	606	J-348	J-431	8	Ductile Iron	130	0	22	0.14
P-521	675	J-431	J-403	8	Ductile Iron	130	0	16	0.11
P-524	189	J-415	J-433	8	Ductile Iron	130	0	2	0.01



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-525	237	J-433	J-434	8	Ductile Iron	130	0	2	0.01
P-526	196	J-434	J-35	8	Ductile Iron	130	0	2	0.01



Label	Elevation (ft)	Flow (gpm)	Hydraulic Grade (ft)
R-1	1,300.00	176	1,300.00
R-2	1,287.10	275	1,287.10
R-3	1,285.38	0	1,285.38

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-1	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-2	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-3	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-4	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-339	65	J-339
J-5	TRUE	1,000	3,500	1,006	3,506	20	68	20	65	J-338	65	J-338
J-6	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-635	65	J-635
J-7	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-635	65	J-635
J-10	TRUE	1,000	3,500	1,000	3,500	20	42	20	42	J-558	42	J-558
J-11	TRUE	1,000	3,500	1,000	3,500	20	42	20	42	J-558	42	J-558
J-12	TRUE	1,000	3,500	1,000	3,500	20	42	20	42	J-558	42	J-558
J-13	TRUE	1,000	3,500	1,003	3,503	20	34	20	33	J-337	33	J-337
J-14	TRUE	1,000	3,500	1,000	3,500	20	34	20	33	J-337	33	J-337
J-15	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-339	65	J-339
J-16	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-338	65	J-338
J-19	TRUE	1,000	3,500	1,000	3,500	20	33	20	33	J-337	33	J-337
J-20	TRUE	1,000	3,500	1,000	3,500	20	63	20	62	J-635	62	J-635
J-21	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-635	62	J-635
J-22	TRUE	1,000	3,500	1,000	3,500	20	67	20	63	J-635	63	J-635
J-23	TRUE	1,000	3,500	1,001	3,501	20	67	20	63	J-635	63	J-635
J-24	TRUE	1,000	3,500	1,000	3,500	20	60	20	61	J-25	61	J-25
J-25	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-24	61	J-24
J-26	TRUE	1,000	3,500	1,000	3,500	20	45	20	46	J-27	46	J-27
J-27	TRUE	1,000	3,500	1,005	3,505	20	46	20	46	J-26	46	J-26
J-28	TRUE	1,000	3,500	1,000	3,500	20	43	20	43	J-558	43	J-558
J-29	TRUE	1,000	3,500	1,000	3,500	20	43	20	43	J-558	43	J-558
J-30	TRUE	1,000	2,943	1,000	2,943	20	20	20	21	J-31	21	J-31
J-31	TRUE	1,000	2,970	1,005	2,974	20	20	20	20	J-30	20	J-30

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-32	TRUE	1,000	3,500	1,000	3,500	20	52	20	52	J-33	52	J-33
J-33	TRUE	1,000	3,500	1,000	3,500	20	50	20	52	J-32	52	J-32
J-34	TRUE	1,000	3,500	1,000	3,500	20	23	20	23	J-35	23	J-35
J-35	TRUE	3,500	3,599	3,505	3,604	20	20	20	20	J-170	20	J-170
J-36	TRUE	1,000	2,160	1,003	2,163	20	20	20	21	J-37	21	J-37
J-37	TRUE	1,000	2,178	1,000	2,178	20	20	20	20	J-36	20	J-36
J-38	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-39	63	J-39
J-39	TRUE	1,000	3,500	1,000	3,500	20	62	20	63	J-38	63	J-38
J-40	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-41	64	J-41
J-41	TRUE	1,000	3,500	1,000	3,500	20	63	20	64	J-40	64	J-40
J-42	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-43	63	J-43
J-43	TRUE	1,000	3,500	1,000	3,500	20	62	20	63	J-42	63	J-42
J-52	TRUE	1,000	3,500	1,005	3,505	20	33	20	33	J-53	33	J-53
J-53	TRUE	1,000	3,500	1,000	3,500	20	31	20	33	J-52	33	J-52
J-56	TRUE	1,000	1,647	1,000	1,647	20	20	20	20	J-57	20	J-57
J-57	TRUE	1,000	1,653	1,000	1,653	20	20	20	20	J-56	20	J-56
J-63	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-64	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-65	TRUE	1,000	3,500	1,005	3,505	20	39	20	39	J-66	39	J-66
J-66	TRUE	1,000	3,500	1,000	3,500	20	37	20	39	J-65	39	J-65
J-67	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-68	61	J-68
J-68	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-342	61	J-342
J-69	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-70	61	J-70
J-70	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-302	61	J-302
J-73	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-74	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-75	TRUE	3,500	4,076	3,505	4,081	20	20	20	20	J-76	20	J-76

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-76	TRUE	1,000	3,500	1,000	3,500	20	32	20	34	J-75	34	J-75
J-77	TRUE	1,000	3,500	1,000	3,500	20	51	20	53	J-78	53	J-78
J-78	TRUE	1,000	3,500	1,003	3,503	20	53	20	53	J-77	53	J-77
J-79	TRUE	3,500	4,959	3,505	4,965	20	20	20	20	J-558	20	J-558
J-80	TRUE	1,000	3,500	1,000	3,500	20	45	20	46	J-558	46	J-558
J-81	TRUE	1,000	3,500	1,000	3,500	20	60	20	62	J-82	62	J-82
J-82	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-81	62	J-81
J-83	TRUE	1,000	3,500	1,000	3,500	20	48	20	48	J-84	48	J-84
J-84	TRUE	1,000	3,500	1,000	3,500	20	47	20	48	J-83	48	J-83
J-85	TRUE	1,000	3,500	1,003	3,503	20	63	20	63	J-86	63	J-86
J-86	TRUE	1,000	3,500	1,000	3,500	20	62	20	63	J-85	63	J-85
J-87	TRUE	1,000	3,500	1,000	3,500	20	39	20	41	J-88	41	J-88
J-88	TRUE	1,000	3,500	1,004	3,504	20	41	20	41	J-87	41	J-87
J-91	TRUE	1,000	3,500	1,000	3,500	20	33	20	32	J-499	32	J-499
J-92	TRUE	1,000	3,447	1,000	3,447	20	20	20	34	J-499	34	J-499
J-93	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-339	65	J-339
J-94	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-339	65	J-339
J-95	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-96	61	J-96
J-96	TRUE	1,000	3,500	1,000	3,500	20	59	20	61	J-95	61	J-95
J-97	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-98	61	J-98
J-98	TRUE	1,000	3,500	1,008	3,508	20	59	20	61	J-97	61	J-97
J-99	TRUE	1,000	3,500	1,000	3,500	20	55	20	55	J-100	55	J-100
J-100	TRUE	1,000	3,500	1,000	3,500	20	53	20	55	J-99	55	J-99
J-101	TRUE	1,000	3,500	1,000	3,500	20	42	20	42	J-102	42	J-102
J-102	TRUE	1,000	3,500	1,000	3,500	20	40	20	42	J-101	42	J-101
J-105	TRUE	1,000	3,500	1,000	3,500	20	46	20	48	J-106	48	J-106
J-106	TRUE	1,000	3,500	1,004	3,504	20	48	20	48	J-105	48	J-105

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-107	TRUE	1,000	2,826	1,005	2,830	20	21	20	20	J-337	20	J-337
J-108	TRUE	1,000	2,816	1,000	2,816	20	20	20	20	J-337	20	J-337
J-115	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-116	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-117	TRUE	3,500	5,582	3,500	5,582	20	20	20	20	J-118	20	J-118
J-118	TRUE	1,000	3,500	1,000	3,500	20	45	20	47	J-117	47	J-117
J-123	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-384	60	J-384
J-124	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-384	60	J-384
J-125	TRUE	1,000	3,500	1,000	3,500	20	44	20	44	J-126	44	J-126
J-126	TRUE	1,000	3,500	1,000	3,500	20	42	20	44	J-125	44	J-125
J-128	TRUE	1,000	3,207	1,000	3,207	20	20	20	22	J-129	22	J-129
J-129	TRUE	1,000	3,271	1,002	3,274	20	20	20	20	J-128	20	J-128
J-130	TRUE	1,000	3,500	1,000	3,500	20	32	20	32	J-499	32	J-499
J-131	TRUE	1,000	3,500	1,000	3,500	20	32	20	32	J-499	32	J-499
J-132	TRUE	1,000	3,500	1,000	3,500	20	47	20	50	J-133	50	J-133
J-133	TRUE	1,000	3,500	1,000	3,500	20	50	20	50	J-132	50	J-132
J-134	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-135	TRUE	1,000	3,500	1,000	3,500	20	67	20	67	J-635	67	J-635
J-136	TRUE	1,000	3,500	1,002	3,502	20	52	20	52	J-137	52	J-137
J-137	TRUE	1,000	3,500	1,000	3,500	20	50	20	52	J-136	52	J-136
J-138	TRUE	1,000	3,500	1,000	3,500	20	35	20	35	J-139	35	J-139
J-139	TRUE	1,000	3,500	1,000	3,500	20	33	20	35	J-138	35	J-138
J-140	TRUE	1,000	3,500	1,000	3,500	20	40	20	43	J-141	43	J-141
J-141	TRUE	1,000	3,500	1,001	3,501	20	43	20	43	J-140	43	J-140
J-142	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-635	64	J-635
J-143	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-144	TRUE	1,000	3,500	1,000	3,500	20	49	20	49	J-145	49	J-145

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-145	TRUE	1,000	3,500	1,000	3,500	20	46	20	49	J-144	49	J-144
J-146	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-147	TRUE	1,000	3,500	1,000	3,500	20	66	20	67	J-635	67	J-635
J-148	TRUE	1,000	3,500	1,000	3,500	20	30	20	30	J-499	30	J-499
J-149	TRUE	1,000	3,500	1,000	3,500	20	28	20	30	J-499	30	J-499
J-150	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-485	66	J-485
J-151	TRUE	1,000	3,500	1,000	3,500	20	65	20	66	J-485	66	J-485
J-152	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-153	61	J-153
J-153	TRUE	1,000	3,500	1,000	3,500	20	60	20	61	J-152	61	J-152
J-154	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-155	61	J-155
J-155	TRUE	1,000	3,500	1,000	3,500	20	44	20	44	J-327	44	J-327
J-160	TRUE	1,000	3,500	1,000	3,500	20	71	20	67	J-635	67	J-635
J-161	TRUE	1,000	3,500	1,000	3,500	20	71	20	67	J-635	67	J-635
J-162	TRUE	1,000	3,500	1,000	3,500	20	51	20	51	J-163	51	J-163
J-163	TRUE	1,000	3,500	1,000	3,500	20	47	20	51	J-162	51	J-162
J-164	TRUE	1,000	3,500	1,000	3,500	20	30	20	30	J-596	30	J-596
J-165	TRUE	1,000	3,500	1,000	3,500	20	27	20	30	J-596	30	J-596
J-166	TRUE	1,000	3,500	1,000	3,500	20	38	20	40	J-167	40	J-167
J-167	TRUE	1,000	3,500	1,003	3,503	20	40	20	41	J-166	41	J-166
J-170	TRUE	1,000	3,500	1,000	3,500	20	20	20	23	J-35	23	J-35
J-173	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-174	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-179	TRUE	1,000	3,500	1,000	3,500	20	61	20	62	J-180	62	J-180
J-180	TRUE	1,000	3,500	1,004	3,504	20	62	20	62	J-179	62	J-179
J-181	TRUE	1,000	3,500	1,000	3,500	20	47	20	47	J-182	47	J-182
J-182	TRUE	1,000	3,500	1,000	3,500	20	46	20	47	J-460	47	J-460
J-183	TRUE	3,500	6,000	3,503	6,003	20	54	20	54	J-184	54	J-184

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-184	TRUE	1,000	3,500	1,000	3,500	20	65	20	66	J-635	66	J-635
J-185	TRUE	1,000	3,500	1,000	3,500	20	62	20	59	J-485	59	J-485
J-186	TRUE	1,000	3,500	1,000	3,500	20	62	20	59	J-485	59	J-485
J-187	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-385	65	J-385
J-188	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-385	65	J-385
J-189	TRUE	1,000	3,500	1,000	3,500	20	23	20	24	J-190	24	J-190
J-190	TRUE	1,000	3,500	1,003	3,503	20	24	20	24	J-189	24	J-189
J-193	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-385	66	J-385
J-195	TRUE	1,000	3,500	1,000	3,500	20	64	20	63	J-33	63	J-33
J-196	TRUE	1,000	3,500	1,000	3,500	20	66	20	64	J-635	64	J-635
J-197	TRUE	1,000	3,500	1,000	3,500	20	47	20	47	J-198	47	J-198
J-198	TRUE	1,000	3,500	1,000	3,500	20	47	20	47	J-197	47	J-197
J-199	TRUE	1,000	3,500	1,000	3,500	20	32	20	35	J-200	35	J-200
J-200	TRUE	1,000	3,500	1,000	3,500	20	35	20	35	J-199	35	J-199
J-203	TRUE	1,000	2,554	1,000	2,554	20	20	20	21	J-204	21	J-204
J-204	TRUE	1,000	2,566	1,003	2,569	20	20	20	20	J-203	20	J-203
J-205	TRUE	1,000	3,500	1,000	3,500	20	68	20	64	J-635	64	J-635
J-212	TRUE	1,000	3,500	1,000	3,500	20	35	20	36	J-213	36	J-213
J-213	TRUE	1,000	3,500	1,005	3,505	20	36	20	36	J-212	36	J-212
J-214	TRUE	1,000	3,500	1,000	3,500	20	35	20	34	J-337	34	J-337
J-215	TRUE	1,000	3,500	1,000	3,500	20	26	20	31	J-216	31	J-216
J-216	TRUE	1,000	3,500	1,000	3,500	20	31	20	31	J-215	31	J-215
J-217	TRUE	1,000	3,500	1,000	3,500	20	51	20	52	J-218	52	J-218
J-218	TRUE	1,000	3,500	1,000	3,500	20	50	20	51	J-83	51	J-83
J-219	TRUE	1,000	3,500	1,001	3,501	20	63	20	63	J-418	63	J-418
J-220	TRUE	1,000	3,500	1,000	3,500	20	60	20	63	J-418	63	J-418
J-227	TRUE	1,000	3,500	1,000	3,500	20	50	20	51	J-145	51	J-145

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-232	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-338	65	J-338
J-233	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-338	65	J-338
J-234	TRUE	3,500	4,613	3,505	4,619	20	20	20	20	J-558	20	J-558
J-235	TRUE	1,000	3,500	1,000	3,500	20	61	20	60	J-485	60	J-485
J-236	TRUE	1,000	3,500	1,000	3,500	20	62	20	60	J-485	60	J-485
J-239	TRUE	1,000	3,500	1,000	3,500	20	62	20	59	J-485	59	J-485
J-240	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-241	63	J-241
J-241	TRUE	1,000	3,500	1,000	3,500	20	59	20	63	J-240	63	J-240
J-242	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-385	66	J-385
J-243	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-263	63	J-263
J-252	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-253	TRUE	1,000	3,500	1,000	3,500	20	64	20	66	J-635	66	J-635
J-254	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-385	66	J-385
J-255	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-299	62	J-299
J-256	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-385	66	J-385
J-257	TRUE	1,000	3,500	1,000	3,500	20	61	20	59	J-485	59	J-485
J-259	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-260	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-261	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-338	65	J-338
J-262	TRUE	1,000	3,500	1,003	3,503	20	66	20	65	J-338	65	J-338
J-263	TRUE	1,000	3,500	1,000	3,500	20	59	20	63	J-243	63	J-243
J-264	TRUE	1,000	3,500	1,000	3,500	20	40	20	40	J-558	40	J-558
J-265	TRUE	1,000	3,500	1,003	3,503	20	35	20	40	J-558	40	J-558
J-266	TRUE	1,000	3,500	1,000	3,500	20	61	20	58	J-485	58	J-485
J-271	TRUE	1,000	3,500	1,004	3,504	20	58	20	58	J-272	58	J-272
J-272	TRUE	1,000	3,500	1,000	3,500	20	53	20	58	J-271	58	J-271
J-273	TRUE	3,500	4,065	3,503	4,067	20	20	20	20	J-499	20	J-499

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-274	TRUE	1,000	3,500	1,000	3,500	20	28	20	33	J-499	33	J-499
J-276	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-277	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-278	TRUE	1,000	3,500	1,000	3,500	20	30	20	30	J-499	30	J-499
J-279	TRUE	1,000	3,500	1,000	3,500	20	30	20	30	J-499	30	J-499
J-280	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-281	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-339	65	J-339
J-282	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-284	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-600	65	J-600
J-285	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-286	TRUE	3,500	5,707	3,502	5,710	20	20	20	20	J-287	20	J-287
J-287	TRUE	1,000	3,500	1,000	3,500	20	42	20	48	J-286	48	J-286
J-290	TRUE	1,000	3,500	1,000	3,500	20	70	20	65	J-635	65	J-635
J-291	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-292	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-293	61	J-293
J-293	TRUE	1,000	3,500	1,000	3,500	20	54	20	61	J-292	61	J-292
J-294	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-311	58	J-311
J-295	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-311	60	J-311
J-296	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-479	58	J-479
J-297	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-296	60	J-296
J-298	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-299	TRUE	1,000	3,500	1,000	3,500	20	56	20	62	J-255	62	J-255
J-302	TRUE	1,000	3,500	1,000	3,500	20	60	20	61	J-70	61	J-70
J-305	TRUE	1,000	3,500	1,000	3,500	20	39	20	41	J-306	41	J-306
J-306	TRUE	3,500	4,592	3,500	4,592	20	20	20	20	J-305	20	J-305
J-307	TRUE	1,000	3,500	1,000	3,500	20	67	20	64	J-635	64	J-635
J-311	TRUE	1,000	3,500	1,000	3,500	20	27	20	34	J-312	34	J-312

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-312	TRUE	3,500	4,258	3,501	4,258	20	20	20	20	J-311	20	J-311
J-314	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-485	66	J-485
J-315	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-485	66	J-485
J-321	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-342	61	J-342
J-322	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-478	61	J-478
J-323	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-324	TRUE	1,000	3,500	1,000	3,500	20	63	20	65	J-635	65	J-635
J-325	TRUE	1,000	3,500	1,000	3,500	20	58	20	65	J-338	65	J-338
J-326	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-338	65	J-338
J-327	TRUE	1,000	2,526	1,000	2,526	20	20	20	55	J-155	55	J-155
J-330	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-635	65	J-635
J-333	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-334	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-336	TRUE	1,000	2,032	1,000	2,032	20	20	20	20	J-337	20	J-337
J-337	TRUE	1,000	1,955	1,000	1,955	20	20	20	23	J-336	23	J-336
J-338	TRUE	1,000	3,500	1,000	3,500	20	49	20	59	J-339	59	J-339
J-339	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-338	59	J-338
J-340	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-341	62	J-341
J-341	TRUE	1,000	3,500	1,000	3,500	20	52	20	62	J-340	62	J-340
J-342	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-68	61	J-68
J-345	TRUE	1,000	3,500	1,000	3,500	20	47	20	49	J-83	49	J-83
J-346	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-348	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-421	59	J-421
J-349	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-350	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-355	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-338	65	J-338
J-356	TRUE	1,000	3,500	1,000	3,500	20	43	20	43	J-357	43	J-357

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-357	TRUE	3,500	3,990	3,503	3,993	20	20	20	34	J-356	34	J-356
J-361	TRUE	1,000	3,500	1,000	3,500	20	37	20	37	J-499	37	J-499
J-362	TRUE	3,500	4,305	3,503	4,308	20	20	20	20	J-499	20	J-499
J-363	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-364	58	J-364
J-364	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-363	58	J-363
J-365	TRUE	1,000	3,500	1,001	3,501	20	68	20	66	J-635	66	J-635
J-366	TRUE	1,000	3,500	1,000	3,500	20	56	20	66	J-635	66	J-635
J-367	TRUE	1,000	2,439	1,000	2,439	20	20	20	20	J-368	20	J-368
J-368	TRUE	1,000	2,298	1,000	2,298	20	20	20	26	J-367	26	J-367
J-369	TRUE	1,000	3,500	1,000	3,500	20	56	20	66	J-635	66	J-635
J-370	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-371	TRUE	1,000	3,500	1,000	3,500	20	41	20	41	J-500	41	J-500
J-372	TRUE	1,000	3,500	1,000	3,500	20	28	20	41	J-500	41	J-500
J-373	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-374	TRUE	1,000	3,500	1,000	3,500	20	55	20	66	J-635	66	J-635
J-375	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-377	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-378	63	J-378
J-378	TRUE	1,000	3,500	1,000	3,500	20	60	20	63	J-377	63	J-377
J-382	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-342	61	J-342
J-383	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-384	60	J-384
J-384	TRUE	1,000	3,500	1,002	3,502	20	58	20	60	J-123	60	J-123
J-385	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-624	65	J-624
J-386	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-82	63	J-82
J-387	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-389	TRUE	3,500	4,675	3,503	4,678	20	20	20	20	J-390	20	J-390
J-390	TRUE	1,000	3,500	1,000	3,500	20	40	20	43	J-389	43	J-389
J-391	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-393	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-163	60	J-163
J-394	TRUE	1,000	3,500	1,000	3,500	20	58	20	59	J-338	59	J-338
J-395	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-396	61	J-396
J-396	TRUE	1,000	2,291	1,000	2,291	20	20	20	64	J-395	64	J-395
J-397	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-398	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-399	60	J-399
J-399	TRUE	1,000	3,500	1,000	3,500	20	46	20	60	J-398	60	J-398
J-400	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-533	66	J-533
J-401	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-24	62	J-24
J-402	TRUE	1,000	3,500	1,000	3,500	20	36	20	36	J-200	36	J-200
J-403	TRUE	1,000	3,500	1,000	3,500	20	47	20	62	J-404	62	J-404
J-404	TRUE	1,000	3,500	1,000	3,500	20	62	20	61	J-403	61	J-403
J-405	TRUE	3,500	6,000	3,500	6,000	20	39	20	39	J-406	39	J-406
J-406	TRUE	1,000	3,500	1,000	3,500	20	54	20	55	J-407	55	J-407
J-407	TRUE	1,000	3,500	1,000	3,500	20	52	20	52	J-408	52	J-408
J-408	TRUE	1,000	3,500	1,000	3,500	20	34	20	52	J-407	52	J-407
J-409	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-410	61	J-410
J-410	TRUE	1,000	3,500	1,000	3,500	20	46	20	61	J-409	61	J-409
J-411	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-405	59	J-405
J-412	TRUE	1,000	3,500	1,000	3,500	20	56	20	57	J-511	57	J-511
J-413	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-412	59	J-412
J-414	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-415	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-416	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-417	TRUE	1,000	3,500	1,000	3,500	20	47	20	48	J-117	48	J-117
J-418	TRUE	1,000	3,500	1,002	3,502	20	32	20	32	J-419	32	J-419
J-419	TRUE	1,000	3,500	1,000	3,500	20	28	20	32	J-418	32	J-418

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-421	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-422	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-86	64	J-86
J-423	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-425	TRUE	1,000	3,500	1,004	3,504	20	61	20	62	J-82	62	J-82
J-426	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-427	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-179	63	J-179
J-428	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-385	65	J-385
J-429	TRUE	1,000	3,500	1,000	3,500	20	48	20	65	J-385	65	J-385
J-430	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-338	65	J-338
J-431	TRUE	1,000	3,500	1,000	3,500	20	54	20	66	J-635	66	J-635
J-432	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-434	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-338	65	J-338
J-435	TRUE	1,000	3,500	1,003	3,503	20	68	20	65	J-339	65	J-339
J-436	TRUE	1,000	3,500	1,000	3,500	20	36	20	41	J-500	41	J-500
J-437	TRUE	1,000	3,500	1,000	3,500	20	37	20	36	J-499	36	J-499
J-438	TRUE	1,000	3,500	1,049	3,549	20	68	20	66	J-635	66	J-635
J-439	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-440	TRUE	1,000	2,798	1,000	2,798	20	20	20	32	J-441	32	J-441
J-441	TRUE	1,000	3,202	1,000	3,202	20	20	20	20	J-440	20	J-440
J-442	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-77	65	J-77
J-443	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-444	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-446	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-385	65	J-385
J-447	TRUE	1,000	3,500	1,001	3,501	20	63	20	63	J-378	63	J-378
J-448	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-449	TRUE	1,000	3,500	1,000	3,500	20	65	20	67	J-635	67	J-635
J-450	TRUE	1,000	3,500	1,016	3,515	20	70	20	67	J-635	67	J-635

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-451	TRUE	1,000	3,500	1,000	3,500	20	66	20	67	J-635	67	J-635
J-453	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-454	TRUE	1,000	3,500	1,000	3,500	20	65	20	67	J-635	67	J-635
J-456	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-457	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-338	65	J-338
J-458	TRUE	1,000	3,500	1,000	3,500	20	39	20	59	J-459	59	J-459
J-459	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-458	59	J-458
J-460	TRUE	1,000	3,500	1,000	3,500	20	42	20	47	J-182	47	J-182
J-461	TRUE	1,000	3,500	1,000	3,500	20	46	20	46	J-500	46	J-500
J-462	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-463	60	J-463
J-463	TRUE	1,000	3,500	1,000	3,500	20	55	20	55	J-596	55	J-596
J-464	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-327	61	J-327
J-465	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-163	61	J-163
J-466	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-485	66	J-485
J-467	TRUE	1,000	3,500	1,001	3,501	20	41	20	47	J-468	47	J-468
J-468	TRUE	1,000	3,500	1,000	3,500	20	42	20	43	J-102	43	J-102
J-469	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-470	TRUE	1,000	3,500	1,000	3,500	20	63	20	67	J-635	67	J-635
J-471	TRUE	1,000	3,500	1,000	3,500	20	49	20	50	J-286	50	J-286
J-472	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-99	62	J-99
J-473	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-341	62	J-341
J-475	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-635	65	J-635
J-476	TRUE	1,000	3,500	1,000	3,500	20	49	20	50	J-558	50	J-558
J-477	TRUE	1,000	3,500	1,000	3,500	20	50	20	50	J-558	50	J-558
J-478	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-311	60	J-311
J-479	TRUE	1,000	3,500	1,000	3,500	20	34	20	34	J-480	34	J-480
J-480	TRUE	3,500	3,877	3,502	3,878	20	20	20	27	J-479	27	J-479

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-483	TRUE	1,000	2,271	1,001	2,272	20	20	20	20	J-337	20	J-337
J-484	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-292	61	J-292
J-485	TRUE	1,000	3,494	1,000	3,494	20	20	20	22	J-532	22	J-532
J-487	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-489	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-491	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-492	TRUE	1,000	3,500	1,000	3,500	20	61	20	66	J-635	66	J-635
J-496	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-339	65	J-339
J-498	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-467	63	J-467
J-499	TRUE	1,000	3,500	1,000	3,500	20	29	20	30	J-278	30	J-278
J-500	TRUE	1,000	3,500	1,012	3,512	20	33	20	41	J-372	41	J-372
J-501	TRUE	1,000	2,946	1,000	2,946	20	20	20	23	J-502	23	J-502
J-502	TRUE	1,000	2,821	1,000	2,821	20	20	20	28	J-501	28	J-501
J-504	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-338	65	J-338
J-505	TRUE	1,000	3,500	1,000	3,500	20	47	20	52	J-402	52	J-402
J-506	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-509	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-510	TRUE	1,000	3,500	1,000	3,500	20	39	20	65	J-635	65	J-635
J-511	TRUE	1,000	3,500	1,000	3,500	20	51	20	52	J-471	52	J-471
J-512	TRUE	1,000	3,500	1,000	3,500	20	53	20	54	J-227	54	J-227
J-513	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-514	TRUE	1,000	3,500	1,000	3,500	20	38	20	65	J-635	65	J-635
J-516	TRUE	1,000	3,500	1,002	3,502	20	42	20	48	J-544	48	J-544
J-518	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-519	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-520	TRUE	1,000	3,500	1,004	3,504	20	53	20	54	J-30	54	J-30
J-524	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-526	TRUE	1,000	3,500	1,000	3,500	20	70	20	65	J-635	65	J-635
J-528	TRUE	1,000	3,500	1,000	3,500	20	59	20	61	J-410	61	J-410
J-531	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-532	TRUE	1,000	3,500	1,000	3,500	20	22	20	21	J-485	21	J-485
J-533	TRUE	1,000	3,500	1,000	3,500	20	46	20	65	J-534	65	J-534
J-534	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-639	65	J-639
J-535	TRUE	1,000	3,500	1,000	3,500	20	40	20	39	J-596	39	J-596
J-536	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-635	65	J-635
J-537	TRUE	1,000	3,500	1,002	3,502	20	69	20	64	J-635	64	J-635
J-543	TRUE	1,000	3,500	1,000	3,500	20	71	20	67	J-635	67	J-635
J-544	TRUE	1,000	3,500	1,001	3,501	20	46	20	47	J-516	47	J-516
J-546	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-547	TRUE	1,000	3,500	1,001	3,501	20	51	20	53	J-477	53	J-477
J-550	TRUE	1,000	3,375	1,000	3,375	20	20	20	53	J-502	53	J-502
J-552	TRUE	1,000	3,500	1,000	3,500	20	48	20	51	J-117	51	J-117
J-557	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-558	TRUE	3,500	4,447	3,503	4,450	20	20	20	20	J-499	20	J-499
J-559	TRUE	1,000	3,500	1,000	3,500	20	34	20	34	J-499	34	J-499
J-560	TRUE	1,000	2,362	1,001	2,364	20	20	20	28	J-203	28	J-203
J-561	TRUE	1,000	3,500	1,003	3,503	20	49	20	49	J-197	49	J-197
J-562	TRUE	1,000	3,500	1,000	3,500	20	70	20	65	J-635	65	J-635
J-563	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-385	66	J-385
J-565	TRUE	1,000	3,500	1,000	3,500	20	54	20	56	J-106	56	J-106
J-568	TRUE	1,000	3,500	1,000	3,500	20	69	20	65	J-635	65	J-635
J-571	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-572	TRUE	1,000	3,500	1,000	3,500	20	49	20	49	J-558	49	J-558
J-573	TRUE	1,000	3,500	1,001	3,501	20	35	20	42	J-617	42	J-617

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-578	TRUE	1,000	3,500	1,008	3,508	20	64	20	62	J-635	62	J-635
J-579	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-580	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-385	66	J-385
J-581	TRUE	1,000	3,500	1,004	3,504	20	69	20	65	J-338	65	J-338
J-582	TRUE	1,000	3,500	1,000	3,500	20	43	20	44	J-357	44	J-357
J-583	TRUE	1,000	3,500	1,000	3,500	20	71	20	65	J-635	65	J-635
J-585	TRUE	1,000	3,500	1,004	3,504	20	48	20	56	J-27	56	J-27
J-588	TRUE	1,000	2,225	1,008	2,233	20	20	20	41	J-389	41	J-389
J-590	TRUE	1,000	3,500	1,004	3,504	20	33	20	39	J-53	39	J-53
J-592	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-593	TRUE	1,000	3,354	1,000	3,354	20	20	20	38	J-387	38	J-387
J-594	TRUE	1,000	3,500	1,000	3,500	20	29	20	32	J-34	32	J-34
J-596	TRUE	1,000	2,984	1,000	2,984	20	20	20	41	J-165	41	J-165
J-597	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-485	65	J-485
J-598	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-599	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-600	TRUE	1,000	3,500	1,001	3,501	20	65	20	65	J-284	65	J-284
J-602	TRUE	1,000	3,500	1,000	3,500	20	58	20	66	J-635	66	J-635
J-605	TRUE	1,000	3,500	1,005	3,505	20	35	20	35	J-139	35	J-139
J-606	TRUE	1,000	3,500	1,001	3,501	20	41	20	44	J-140	44	J-140
J-607	TRUE	1,000	3,500	1,000	3,500	20	71	20	66	J-635	66	J-635
J-608	TRUE	1,000	3,500	1,016	3,515	20	68	20	67	J-635	67	J-635
J-609	TRUE	1,000	3,500	1,002	3,502	20	41	20	49	J-167	49	J-167
J-610	TRUE	1,000	3,500	1,000	3,500	20	42	20	47	J-618	47	J-618
J-613	TRUE	1,000	3,500	1,003	3,503	20	27	20	65	J-338	65	J-338
J-614	TRUE	1,000	2,720	1,001	2,721	20	20	20	45	J-501	45	J-501
J-615	TRUE	1,000	1,650	1,000	1,650	20	20	20	20	J-56	20	J-56

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-616	TRUE	1,000	1,819	1,008	1,826	20	20	20	21	J-56	21	J-56
J-617	TRUE	1,000	3,500	1,002	3,502	20	31	20	35	J-215	35	J-215
J-618	TRUE	1,000	3,500	1,000	3,500	20	33	20	38	J-215	38	J-215
J-619	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-385	66	J-385
J-620	TRUE	1,000	3,500	1,000	3,500	20	64	20	60	J-485	60	J-485
J-623	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-624	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-386	65	J-386
J-625	TRUE	1,000	3,500	1,000	3,500	20	46	20	47	J-306	47	J-306
J-626	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-661	61	J-661
J-627	TRUE	1,000	3,500	1,000	3,500	20	55	20	52	J-485	52	J-485
J-628	TRUE	1,000	3,500	1,000	3,500	20	61	20	58	J-485	58	J-485
J-629	TRUE	1,000	2,886	1,003	2,889	20	20	20	51	J-306	51	J-306
J-630	TRUE	1,000	3,500	1,003	3,503	20	47	20	47	J-306	47	J-306
J-632	TRUE	1,000	3,500	1,005	3,505	20	27	20	37	J-633	37	J-633
J-633	TRUE	1,000	3,500	1,003	3,503	20	24	20	26	J-189	26	J-189
J-635	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-484	61	J-484
J-638	TRUE	1,000	3,500	1,000	3,500	20	65	20	62	J-635	62	J-635
J-639	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-401	65	J-401
J-640	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-641	65	J-641
J-641	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-427	65	J-427
J-642	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-643	TRUE	1,000	3,500	1,000	3,500	20	67	20	63	J-635	63	J-635
J-646	TRUE	1,000	2,083	1,000	2,083	20	20	20	47	J-368	47	J-368
J-648	TRUE	1,000	3,500	1,003	3,503	20	28	20	37	J-189	37	J-189
J-649	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-133	59	J-133
J-651	TRUE	1,000	2,260	1,003	2,263	20	20	20	20	J-36	20	J-36
J-652	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-600	65	J-600

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-661	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-395	61	J-395
J-662	TRUE	1,000	3,500	1,000	3,500	20	48	20	50	J-133	50	J-133
J-664	TRUE	1,000	3,500	1,003	3,503	20	58	20	59	J-421	59	J-421
J-667	TRUE	1,000	3,500	1,000	3,500	20	40	20	38	J-485	38	J-485
J-673	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-624	65	J-624
J-1	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-2	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-5	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-6	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-7	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-8	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-9	TRUE	1,000	3,500	1,000	3,500	20	63	20	60	J-485	60	J-485
J-10	TRUE	1,000	3,500	1,000	3,500	20	63	20	60	J-485	60	J-485
J-13	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-485	65	J-485
J-14	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-485	65	J-485
J-15	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-16	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-17	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-18	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-19	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-20	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-635	66	J-635
J-21	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-22	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-635	66	J-635
J-23	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-24	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-33	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-34	60	J-34
J-34	TRUE	1,000	3,500	1,000	3,500	20	58	20	60	J-33	60	J-33

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-43	TRUE	1,000	3,500	1,000	3,500	20	65	20	64	J-485	64	J-485
J-44	TRUE	1,000	3,500	1,000	3,500	20	62	20	64	J-485	64	J-485
J-47	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-373	61	J-373
J-48	TRUE	1,000	3,500	1,000	3,500	20	58	20	61	J-270	61	J-270
J-49	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-485	65	J-485
J-50	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-485	65	J-485
J-51	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-52	TRUE	1,000	3,500	1,000	3,500	20	66	20	67	J-635	67	J-635
J-53	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-54	TRUE	1,000	3,500	1,000	3,500	20	65	20	67	J-635	67	J-635
J-55	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-485	66	J-485
J-56	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-485	66	J-485
J-61	TRUE	1,000	3,500	1,000	3,500	20	53	20	53	J-62	53	J-62
J-62	TRUE	1,000	3,500	1,000	3,500	20	53	20	53	J-266	53	J-266
J-63	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-64	TRUE	1,000	3,500	1,000	3,500	20	64	20	66	J-635	66	J-635
J-65	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-66	TRUE	1,000	3,500	1,000	3,500	20	64	20	66	J-635	66	J-635
J-67	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-68	TRUE	1,000	3,500	1,000	3,500	20	65	20	66	J-635	66	J-635
J-69	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-70	TRUE	1,000	3,500	1,000	3,500	20	64	20	66	J-635	66	J-635
J-71	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-72	TRUE	1,000	3,500	1,000	3,500	20	64	20	66	J-635	66	J-635
J-73	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-74	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-77	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635

WATERLINE TANKSERLEY REPLACEMENT
Future Max Day + Fire Flow



Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-78	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-635	66	J-635
J-81	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-82	TRUE	1,000	3,500	1,000	3,500	20	63	20	66	J-635	66	J-635
J-85	TRUE	1,000	3,500	1,000	3,500	20	59	20	63	J-86	63	J-86
J-86	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-85	63	J-85
J-91	TRUE	1,000	3,500	1,000	3,500	20	57	20	58	J-326	58	J-326
J-101	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-102	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-106	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-107	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-120	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-121	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-125	TRUE	1,000	3,500	1,000	3,500	20	56	20	56	J-126	56	J-126
J-126	TRUE	1,000	3,500	1,000	3,500	20	51	20	56	J-125	56	J-125
J-129	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-131	TRUE	1,000	3,500	1,000	3,500	20	65	20	63	J-485	63	J-485
J-132	TRUE	1,000	3,500	1,000	3,500	20	67	20	63	J-485	63	J-485
J-137	TRUE	1,000	3,500	1,000	3,500	20	64	20	61	J-485	61	J-485
J-138	TRUE	1,000	3,500	1,000	3,500	20	63	20	61	J-485	61	J-485
J-139	TRUE	1,000	3,500	1,000	3,500	20	23	20	23	J-260	23	J-260
J-140	TRUE	1,000	3,500	1,000	3,500	20	21	20	21	J-193	21	J-193
J-142	TRUE	1,000	3,500	1,000	3,500	20	58	20	60	J-485	60	J-485
J-143	TRUE	1,000	3,500	1,000	3,500	20	64	20	60	J-485	60	J-485
J-150	TRUE	1,000	3,500	1,000	3,500	20	57	20	57	J-151	57	J-151
J-151	TRUE	1,000	3,500	1,000	3,500	20	56	20	57	J-150	57	J-150
J-152	TRUE	1,000	3,500	1,000	3,500	20	62	20	60	J-485	60	J-485
J-153	TRUE	1,000	3,500	1,000	3,500	20	64	20	60	J-485	60	J-485

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-154	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-193	62	J-193
J-155	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-200	61	J-200
J-156	TRUE	1,000	3,500	1,000	3,500	20	64	20	60	J-485	60	J-485
J-157	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-194	64	J-194
J-163	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-164	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-165	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-166	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-167	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-168	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-169	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-171	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-312	63	J-312
J-172	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-177	63	J-177
J-177	TRUE	1,000	3,500	1,000	3,500	20	59	20	59	J-178	59	J-178
J-178	TRUE	1,000	3,500	1,000	3,500	20	51	20	59	J-177	59	J-177
J-181	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-185	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-186	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-189	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-190	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-191	TRUE	1,000	3,500	1,000	3,500	20	42	20	42	J-192	42	J-192
J-192	TRUE	1,000	3,500	1,000	3,500	20	33	20	42	J-260	42	J-260
J-193	TRUE	1,000	3,370	1,000	3,370	20	20	20	20	J-194	20	J-194
J-194	TRUE	1,000	3,309	1,000	3,309	20	20	20	20	J-260	20	J-260
J-195	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-485	65	J-485
J-196	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-485	65	J-485
J-197	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-200	TRUE	1,000	3,500	1,000	3,500	20	49	20	49	J-139	49	J-139
J-201	TRUE	1,000	3,500	1,000	3,500	20	47	20	47	J-193	47	J-193
J-202	TRUE	1,000	3,500	1,000	3,500	20	66	20	63	J-485	63	J-485
J-203	TRUE	1,000	3,500	1,000	3,500	20	64	20	63	J-485	63	J-485
J-204	TRUE	1,000	3,500	1,000	3,500	20	65	20	63	J-485	63	J-485
J-209	TRUE	1,000	3,500	1,000	3,500	20	66	20	63	J-485	63	J-485
J-210	TRUE	1,000	3,500	1,000	3,500	20	57	20	63	J-485	63	J-485
J-212	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-485	65	J-485
J-213	TRUE	1,000	3,500	1,000	3,500	20	65	20	65	J-485	65	J-485
J-214	TRUE	1,000	3,500	1,000	3,500	20	66	20	65	J-485	65	J-485
J-215	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-485	65	J-485
J-222	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-223	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-224	TRUE	1,000	3,500	1,000	3,500	20	63	20	63	J-485	63	J-485
J-225	TRUE	1,000	3,500	1,000	3,500	20	64	20	62	J-485	62	J-485
J-226	TRUE	1,000	3,500	1,000	3,500	20	65	20	64	J-485	64	J-485
J-227	TRUE	1,000	3,500	1,000	3,500	20	64	20	64	J-85	64	J-85
J-229	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-231	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-232	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-233	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-235	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-237	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-239	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-242	TRUE	1,000	3,500	1,000	3,500	20	69	20	67	J-635	67	J-635
J-244	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-245	62	J-245
J-245	TRUE	1,000	3,500	1,000	3,500	20	48	20	62	J-244	62	J-244

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-246	TRUE	1,000	3,500	1,000	3,500	20	62	20	63	J-247	63	J-247
J-247	TRUE	1,000	3,500	1,000	3,500	20	61	20	61	J-91	61	J-91
J-250	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-254	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-255	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-260	TRUE	1,000	3,200	1,000	3,200	20	20	20	23	J-194	23	J-194
J-262	TRUE	1,000	3,500	1,000	3,500	20	64	20	62	J-485	62	J-485
J-263	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-266	TRUE	1,000	3,500	1,000	3,500	20	49	20	53	J-62	53	J-62
J-268	TRUE	1,000	3,500	1,000	3,500	20	64	20	65	J-485	65	J-485
J-270	TRUE	1,000	3,500	1,000	3,500	20	60	20	60	J-373	60	J-373
J-272	TRUE	1,000	3,500	1,000	3,500	20	70	20	67	J-635	67	J-635
J-276	TRUE	1,000	3,500	1,000	3,500	20	69	20	66	J-485	66	J-485
J-277	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-485	66	J-485
J-282	TRUE	1,000	3,500	1,000	3,500	20	68	20	67	J-635	67	J-635
J-284	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-287	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-291	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-293	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-296	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-297	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-298	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-301	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-302	TRUE	1,000	3,500	1,000	3,500	20	38	20	66	J-635	66	J-635
J-312	TRUE	1,000	3,500	1,000	3,500	20	60	20	62	J-372	62	J-372
J-321	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-322	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-324	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-325	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-326	TRUE	1,000	3,500	1,000	3,500	20	56	20	56	J-62	56	J-62
J-327	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-331	TRUE	1,000	3,500	1,000	3,500	20	67	20	65	J-485	65	J-485
J-332	TRUE	1,000	3,500	1,000	3,500	20	68	20	66	J-635	66	J-635
J-336	TRUE	1,000	3,500	1,000	3,500	20	70	20	66	J-635	66	J-635
J-340	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-343	58	J-343
J-343	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-340	58	J-340
J-349	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-353	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-355	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-363	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-635	66	J-635
J-365	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-366	TRUE	1,000	3,500	1,000	3,500	20	45	20	41	J-485	41	J-485
J-367	TRUE	1,000	3,500	1,000	3,500	20	66	20	62	J-485	62	J-485
J-370	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-372	TRUE	1,000	3,500	1,000	3,500	20	62	20	62	J-312	62	J-312
J-373	TRUE	1,000	3,500	1,000	3,500	20	58	20	60	J-270	60	J-270
J-375	TRUE	1,000	3,500	1,000	3,500	20	66	20	64	J-485	64	J-485
J-378	TRUE	1,000	3,500	1,000	3,500	20	67	20	66	J-635	66	J-635
J-380	TRUE	1,000	3,500	1,005	3,505	20	50	20	49	J-384	49	J-384
J-381	TRUE	1,000	3,500	1,004	3,504	20	30	20	33	J-382	33	J-382
J-382	TRUE	1,000	3,500	1,004	3,504	20	25	20	32	J-386	32	J-386
J-383	TRUE	1,000	3,500	1,005	3,505	20	22	20	22	J-386	22	J-386
J-384	TRUE	1,000	3,500	1,003	3,503	20	25	20	31	J-386	31	J-386
J-385	TRUE	1,000	3,500	1,003	3,503	20	32	20	34	J-384	34	J-384

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
J-386	TRUE	1,000	3,150	1,003	3,153	20	20	20	30	J-383	30	J-383
J-387	TRUE	1,000	2,787	1,003	2,789	20	20	20	47	J-440	47	J-440
J-389	TRUE	1,000	3,051	1,003	3,054	20	20	20	21	J-588	21	J-588
J-401	TRUE	1,000	3,500	1,000	3,500	20	66	20	66	J-385	66	J-385
J-403	TRUE	1,000	3,500	1,005	3,505	20	37	20	50	J-431	50	J-431
J-404	TRUE	1,000	3,500	1,000	3,500	20	58	20	58	J-271	58	J-271
J-405	TRUE	1,000	3,500	1,000	3,500	20	68	20	65	J-339	65	J-339
J-406	TRUE	1,000	3,500	1,008	3,508	20	55	20	56	J-425	56	J-425
J-407	TRUE	1,000	3,500	1,005	3,505	20	47	20	52	J-403	52	J-403
J-408	TRUE	1,000	3,500	1,000	3,500	20	63	20	62	J-635	62	J-635
J-409	TRUE	1,000	3,500	1,000	3,500	20	42	20	43	J-410	43	J-410
J-410	TRUE	1,000	2,828	1,005	2,833	20	20	20	52	J-409	52	J-409
J-411	TRUE	1,000	3,500	1,000	3,500	20	34	20	38	J-648	38	J-648
J-412	TRUE	1,000	3,500	1,000	3,500	20	52	20	52	J-413	52	J-413
J-413	TRUE	1,000	3,422	1,000	3,422	20	20	20	53	J-412	53	J-412
J-414	TRUE	1,000	3,500	1,000	3,500	20	40	20	40	J-558	40	J-558
J-415	TRUE	1,000	3,500	1,000	3,500	20	21	20	25	J-433	25	J-433
J-416	TRUE	1,000	3,500	1,000	3,500	20	33	20	39	J-605	39	J-605
J-418	TRUE	1,000	3,500	1,000	3,500	20	33	20	41	J-419	41	J-419
J-419	TRUE	1,000	3,500	1,000	3,500	20	36	20	42	J-418	42	J-418
J-421	TRUE	1,000	3,500	1,002	3,502	20	59	20	59	J-664	59	J-664
J-422	TRUE	1,000	3,500	1,005	3,505	20	43	20	55	J-407	55	J-407
J-423	TRUE	1,000	3,500	1,006	3,506	20	49	20	53	J-424	53	J-424
J-424	TRUE	1,000	3,500	1,004	3,504	20	49	20	53	J-423	53	J-423
J-425	TRUE	1,000	3,500	1,004	3,504	20	48	20	52	J-426	52	J-426
J-426	TRUE	1,000	3,500	1,009	3,509	20	43	20	54	J-425	54	J-425
J-427	TRUE	1,000	3,500	1,009	3,509	20	41	20	47	J-428	47	J-428

Future Max Day + Fire Flow



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,286.21	0	1,457.34	74
J-2	1,286.20	0	1,457.34	74
J-3	1,286.21	0	1,457.34	74
J-4	1,287.47	0	1,457.36	74
J-5	1,287.47	11	1,457.36	74
J-6	1,287.63	0	1,457.36	73
J-7	1,287.63	0	1,457.36	73
J-10	1,282.55	0	1,457.10	76
J-11	1,282.55	0	1,457.10	76
J-12	1,282.56	0	1,457.10	76
J-13	1,295.30	5	1,457.33	70
J-14	1,295.31	0	1,457.33	70
J-15	1,286.20	0	1,457.35	74
J-16	1,286.20	0	1,457.35	74
J-19	1,295.33	0	1,457.33	70
J-20	1,296.92	0	1,457.34	69
J-21	1,296.71	0	1,457.34	69
J-22	1,290.04	0	1,457.34	72
J-23	1,290.02	3	1,457.34	72
J-24	1,293.63	0	1,457.18	71
J-25	1,293.62	0	1,457.18	71
J-26	1,291.44	0	1,457.18	72
J-27	1,291.45	9	1,457.18	72
J-28	1,282.60	0	1,457.10	75
J-29	1,282.58	0	1,457.10	76
J-30	1,291.91	0	1,457.15	71
J-31	1,291.90	9	1,457.15	71
J-32	1,288.87	0	1,457.34	73
J-33	1,288.88	0	1,457.34	73
J-34	1,280.00	0	1,457.10	77
J-35	1,280.00	9	1,457.10	77
J-36	1,290.00	6	1,457.14	72
J-37	1,290.00	0	1,457.14	72
J-38	1,286.06	0	1,457.35	74
J-39	1,286.06	0	1,457.35	74
J-40	1,287.34	0	1,457.35	74
J-41	1,287.33	0	1,457.35	74
J-42	1,286.02	0	1,457.35	74
J-43	1,286.02	0	1,457.35	74
J-52	1,282.73	9	1,457.13	75
J-53	1,282.76	0	1,457.13	75
J-56	1,284.34	0	1,457.13	75
J-57	1,284.34	0	1,457.13	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-63	1,288.88	0	1,457.34	73
J-64	1,288.88	0	1,457.34	73
J-65	1,289.81	9	1,457.15	72
J-66	1,289.79	0	1,457.15	72
J-67	1,300.00	0	1,457.34	68
J-68	1,300.00	0	1,457.34	68
J-69	1,300.00	0	1,457.34	68
J-70	1,300.00	0	1,457.34	68
J-73	1,281.08	0	1,457.31	76
J-74	1,281.07	0	1,457.31	76
J-75	1,281.71	9	1,457.10	76
J-76	1,281.72	0	1,457.10	76
J-77	1,290.00	0	1,457.18	72
J-78	1,290.00	6	1,457.18	72
J-79	1,282.29	10	1,457.10	76
J-80	1,282.26	0	1,457.10	76
J-81	1,294.53	0	1,457.18	70
J-82	1,294.54	0	1,457.18	70
J-83	1,288.32	0	1,457.35	73
J-84	1,288.30	0	1,457.35	73
J-85	1,290.29	7	1,457.19	72
J-86	1,290.32	0	1,457.19	72
J-87	1,282.10	0	1,457.12	76
J-88	1,282.07	7	1,457.12	76
J-91	1,282.43	0	1,457.10	76
J-92	1,282.41	0	1,457.10	76
J-93	1,286.20	0	1,457.35	74
J-94	1,286.19	0	1,457.35	74
J-95	1,287.69	0	1,457.35	73
J-96	1,287.71	0	1,457.35	73
J-97	1,287.75	0	1,457.34	73
J-98	1,287.77	16	1,457.34	73
J-99	1,287.97	0	1,457.35	73
J-100	1,287.97	0	1,457.35	73
J-101	1,288.28	0	1,457.35	73
J-102	1,288.30	0	1,457.35	73
J-105	1,285.07	0	1,457.16	74
J-106	1,285.10	7	1,457.16	74
J-107	1,296.73	9	1,457.33	69
J-108	1,296.73	0	1,457.33	69
J-115	1,287.08	0	1,457.37	74
J-116	1,287.10	0	1,457.57	74
J-117	1,299.66	1	1,457.34	68



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-118	1,299.61	0	1,457.34	68
J-123	1,300.00	0	1,457.37	68
J-124	1,300.00	0	1,457.37	68
J-125	1,280.00	0	1,457.13	77
J-126	1,280.00	0	1,457.13	77
J-128	1,282.74	0	1,457.12	75
J-129	1,282.74	5	1,457.12	75
J-130	1,282.41	0	1,457.10	76
J-131	1,282.41	0	1,457.10	76
J-132	1,287.94	0	1,457.34	73
J-133	1,287.95	0	1,457.34	73
J-134	1,287.33	0	1,457.18	73
J-135	1,287.29	0	1,457.18	74
J-136	1,287.37	5	1,457.19	73
J-137	1,287.36	0	1,457.19	73
J-138	1,280.26	0	1,457.11	77
J-139	1,280.30	0	1,457.11	76
J-140	1,280.86	0	1,457.11	76
J-141	1,280.83	3	1,457.11	76
J-142	1,288.87	0	1,457.34	73
J-143	1,288.87	0	1,457.34	73
J-144	1,280.00	0	1,457.16	77
J-145	1,280.00	0	1,457.16	77
J-146	1,284.22	0	1,457.18	75
J-147	1,284.23	0	1,457.18	75
J-148	1,282.74	0	1,457.10	75
J-149	1,282.75	0	1,457.10	75
J-150	1,282.53	0	1,457.18	76
J-151	1,282.57	0	1,457.18	76
J-152	1,300.00	0	1,457.35	68
J-153	1,300.00	0	1,457.35	68
J-154	1,300.00	0	1,457.35	68
J-155	1,300.00	0	1,457.35	68
J-160	1,285.34	0	1,457.18	74
J-161	1,285.38	0	1,457.18	74
J-162	1,300.00	0	1,457.35	68
J-163	1,300.00	0	1,457.35	68
J-164	1,287.53	0	1,457.34	73
J-165	1,287.55	0	1,457.34	73
J-166	1,284.46	0	1,457.16	75
J-167	1,284.51	5	1,457.16	75
J-170	1,280.00	0	1,457.10	77
J-173	1,283.43	0	1,457.33	75



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-174	1,283.62	0	1,457.33	75
J-179	1,293.02	0	1,457.18	71
J-180	1,293.00	7	1,457.18	71
J-181	1,280.00	0	1,457.15	77
J-182	1,280.00	0	1,457.15	77
J-183	1,280.00	6	1,457.29	77
J-184	1,280.00	0	1,457.29	77
J-185	1,282.23	0	1,457.18	76
J-186	1,282.18	0	1,457.18	76
J-187	1,294.21	0	1,457.18	71
J-188	1,294.19	0	1,457.18	71
J-189	1,286.00	0	1,457.12	74
J-190	1,285.95	5	1,457.12	74
J-193	1,290.04	0	1,457.18	72
J-195	1,287.68	0	1,457.34	73
J-196	1,287.66	0	1,457.34	73
J-197	1,283.22	0	1,457.12	75
J-198	1,283.22	0	1,457.12	75
J-199	1,288.46	0	1,457.34	73
J-200	1,288.48	0	1,457.34	73
J-203	1,282.25	0	1,457.11	76
J-204	1,282.24	5	1,457.11	76
J-205	1,288.69	0	1,457.34	73
J-212	1,290.41	0	1,457.15	72
J-213	1,290.38	9	1,457.15	72
J-214	1,295.27	0	1,457.33	70
J-215	1,295.85	0	1,457.33	70
J-216	1,295.80	0	1,457.33	70
J-217	1,288.26	0	1,457.35	73
J-218	1,288.29	0	1,457.35	73
J-219	1,288.80	3	1,457.34	73
J-220	1,288.83	0	1,457.34	73
J-227	1,280.00	0	1,457.16	77
J-232	1,286.38	0	1,457.35	74
J-233	1,286.35	0	1,457.35	74
J-234	1,282.61	10	1,457.10	75
J-235	1,282.14	0	1,457.18	76
J-236	1,282.11	0	1,457.18	76
J-239	1,282.11	0	1,457.18	76
J-240	1,290.00	0	1,457.18	72
J-241	1,290.00	0	1,457.18	72
J-242	1,290.00	0	1,457.18	72
J-243	1,290.00	0	1,457.18	72



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-252	1,282.06	0	1,457.32	76
J-253	1,282.03	0	1,457.32	76
J-254	1,291.78	0	1,457.18	72
J-255	1,291.80	0	1,457.18	72
J-256	1,290.00	0	1,457.18	72
J-257	1,282.23	0	1,457.18	76
J-259	1,283.04	0	1,457.33	75
J-260	1,282.85	0	1,457.33	75
J-261	1,286.03	0	1,457.35	74
J-262	1,286.06	5	1,457.35	74
J-263	1,290.00	0	1,457.18	72
J-264	1,282.88	0	1,457.10	75
J-265	1,282.80	5	1,457.10	75
J-266	1,282.32	0	1,457.18	76
J-271	1,300.00	7	1,457.34	68
J-272	1,300.00	0	1,457.34	68
J-273	1,282.48	5	1,457.10	76
J-274	1,282.44	0	1,457.10	76
J-276	1,287.84	0	1,457.18	73
J-277	1,287.86	0	1,457.18	73
J-278	1,282.73	0	1,457.10	75
J-279	1,282.74	0	1,457.10	75
J-280	1,288.87	0	1,457.34	73
J-281	1,286.24	0	1,457.35	74
J-282	1,287.88	0	1,457.18	73
J-284	1,289.28	0	1,457.24	73
J-285	1,289.33	0	1,457.24	73
J-286	1,298.92	5	1,457.34	69
J-287	1,298.85	0	1,457.34	69
J-290	1,285.77	0	1,457.34	74
J-291	1,286.38	0	1,457.34	74
J-292	1,300.00	0	1,457.34	68
J-293	1,300.00	0	1,457.34	68
J-294	1,300.00	0	1,457.34	68
J-295	1,300.00	0	1,457.34	68
J-296	1,300.00	0	1,457.34	68
J-297	1,300.00	0	1,457.34	68
J-298	1,287.88	0	1,457.18	73
J-299	1,291.84	0	1,457.18	72
J-302	1,300.00	0	1,457.34	68
J-305	1,287.21	0	1,457.18	74
J-306	1,287.32	0	1,457.18	73
J-307	1,288.89	0	1,457.34	73



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-311	1,300.00	0	1,457.34	68
J-312	1,299.91	1	1,457.34	68
J-314	1,282.43	0	1,457.18	76
J-315	1,282.43	0	1,457.18	76
J-321	1,300.00	0	1,457.34	68
J-322	1,300.00	0	1,457.34	68
J-323	1,286.23	0	1,457.33	74
J-324	1,286.30	0	1,457.33	74
J-325	1,286.06	0	1,457.35	74
J-326	1,286.10	0	1,457.35	74
J-327	1,300.00	0	1,457.35	68
J-330	1,287.12	0	1,457.34	74
J-333	1,290.06	0	1,457.20	72
J-334	1,290.00	0	1,457.20	72
J-336	1,299.05	0	1,457.33	68
J-337	1,299.07	0	1,457.33	68
J-338	1,300.00	0	1,457.35	68
J-339	1,300.00	0	1,457.35	68
J-340	1,287.48	0	1,457.35	73
J-341	1,287.57	0	1,457.35	73
J-342	1,300.00	0	1,457.34	68
J-345	1,288.34	0	1,457.35	73
J-346	1,285.59	0	1,457.34	74
J-348	1,300.00	0	1,457.35	68
J-349	1,293.78	0	1,457.18	71
J-350	1,293.92	0	1,457.18	71
J-355	1,286.32	0	1,457.35	74
J-356	1,280.00	0	1,457.13	77
J-357	1,280.00	6	1,457.13	77
J-361	1,282.53	0	1,457.10	76
J-362	1,282.60	6	1,457.10	75
J-363	1,300.00	0	1,457.34	68
J-364	1,300.00	0	1,457.34	68
J-365	1,290.00	2	1,457.23	72
J-366	1,290.00	0	1,457.23	72
J-367	1,286.28	0	1,457.34	74
J-368	1,286.34	0	1,457.34	74
J-369	1,290.00	0	1,457.23	72
J-370	1,290.00	0	1,457.23	72
J-371	1,280.00	0	1,457.14	77
J-372	1,280.00	0	1,457.14	77
J-373	1,290.21	0	1,457.20	72
J-374	1,290.16	0	1,457.20	72



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-375	1,288.34	0	1,457.18	73
J-377	1,290.00	0	1,457.20	72
J-378	1,290.00	0	1,457.20	72
J-382	1,300.00	0	1,457.34	68
J-383	1,300.00	0	1,457.36	68
J-384	1,300.00	3	1,457.37	68
J-385	1,294.82	0	1,457.18	70
J-386	1,294.65	0	1,457.18	70
J-387	1,293.18	0	1,457.18	71
J-389	1,280.00	6	1,457.12	77
J-390	1,280.00	0	1,457.12	77
J-391	1,293.13	0	1,457.18	71
J-393	1,300.00	0	1,457.35	68
J-394	1,299.97	0	1,457.35	68
J-395	1,300.00	0	1,457.34	68
J-396	1,300.00	0	1,457.34	68
J-397	1,289.50	0	1,457.24	73
J-398	1,286.59	0	1,457.35	74
J-399	1,286.50	0	1,457.35	74
J-400	1,293.77	0	1,457.18	71
J-401	1,293.66	0	1,457.18	71
J-402	1,288.43	0	1,457.34	73
J-403	1,287.92	0	1,457.34	73
J-404	1,287.79	0	1,457.34	73
J-405	1,300.00	0	1,457.34	68
J-406	1,300.00	0	1,457.34	68
J-407	1,299.84	0	1,457.34	68
J-408	1,299.64	0	1,457.34	68
J-409	1,289.66	0	1,457.34	73
J-410	1,289.78	0	1,457.34	72
J-411	1,300.00	0	1,457.34	68
J-412	1,300.00	0	1,457.34	68
J-413	1,300.00	0	1,457.34	68
J-414	1,286.64	0	1,457.36	74
J-415	1,287.00	0	1,457.37	74
J-416	1,293.68	0	1,457.18	71
J-417	1,299.52	0	1,457.34	68
J-418	1,289.42	5	1,457.34	73
J-419	1,289.36	0	1,457.34	73
J-421	1,290.23	0	1,457.19	72
J-422	1,290.24	0	1,457.19	72
J-423	1,293.26	0	1,457.18	71
J-425	1,294.44	7	1,457.18	70

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Junction Table



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-426	1,293.12	0	1,457.18	71
J-427	1,293.03	0	1,457.18	71
J-428	1,294.24	0	1,457.18	70
J-429	1,294.04	0	1,457.18	71
J-430	1,286.20	0	1,457.35	74
J-431	1,286.36	0	1,457.29	74
J-432	1,286.47	0	1,457.29	74
J-434	1,286.19	0	1,457.35	74
J-435	1,287.44	5	1,457.35	74
J-436	1,280.00	0	1,457.14	77
J-437	1,282.31	0	1,457.10	76
J-438	1,287.29	93	1,457.26	74
J-439	1,287.36	0	1,457.26	74
J-440	1,290.00	0	1,457.22	72
J-441	1,290.00	0	1,457.22	72
J-442	1,290.00	0	1,457.18	72
J-443	1,290.00	0	1,457.18	72
J-444	1,288.18	0	1,457.18	73
J-446	1,294.31	0	1,457.18	70
J-447	1,290.00	1	1,457.20	72
J-448	1,287.18	0	1,457.18	74
J-449	1,287.13	0	1,457.18	74
J-450	1,285.92	29	1,457.18	74
J-451	1,285.80	0	1,457.18	74
J-453	1,284.32	0	1,457.18	75
J-454	1,284.01	0	1,457.18	75
J-456	1,290.26	0	1,457.19	72
J-457	1,286.15	0	1,457.35	74
J-458	1,300.00	0	1,457.34	68
J-459	1,300.00	0	1,457.34	68
J-460	1,280.00	0	1,457.15	77
J-461	1,280.00	0	1,457.14	77
J-462	1,287.98	0	1,457.34	73
J-463	1,287.94	0	1,457.34	73
J-464	1,300.00	0	1,457.35	68
J-465	1,300.00	0	1,457.35	68
J-466	1,282.42	0	1,457.18	76
J-467	1,288.08	3	1,457.35	73
J-468	1,288.27	0	1,457.35	73
J-469	1,283.38	0	1,457.18	75
J-470	1,283.23	0	1,457.18	75
J-471	1,299.01	0	1,457.34	69
J-472	1,287.57	0	1,457.35	73



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-473	1,287.52	0	1,457.35	73
J-475	1,287.67	0	1,457.34	73
J-476	1,282.27	0	1,457.11	76
J-477	1,281.94	0	1,457.11	76
J-478	1,300.00	0	1,457.34	68
J-479	1,299.86	0	1,457.34	68
J-480	1,299.61	3	1,457.34	68
J-483	1,298.69	2	1,457.33	69
J-484	1,300.00	0	1,457.34	68
J-485	1,288.36	0	1,457.18	73
J-487	1,280.00	0	1,457.28	77
J-489	1,280.82	0	1,457.30	76
J-491	1,280.00	0	1,457.27	77
J-492	1,280.00	0	1,457.27	77
J-496	1,286.29	0	1,457.35	74
J-498	1,287.40	0	1,457.35	74
J-499	1,282.76	0	1,457.10	75
J-500	1,280.00	24	1,457.13	77
J-501	1,286.30	0	1,457.31	74
J-502	1,286.55	0	1,457.31	74
J-504	1,286.78	0	1,457.35	74
J-505	1,287.22	0	1,457.35	74
J-506	1,287.19	0	1,457.37	74
J-509	1,284.54	0	1,457.34	75
J-510	1,285.23	0	1,457.34	74
J-511	1,299.59	0	1,457.34	68
J-512	1,280.00	0	1,457.17	77
J-513	1,285.85	0	1,457.34	74
J-514	1,286.50	0	1,457.34	74
J-516	1,290.00	4	1,457.33	72
J-518	1,285.84	0	1,457.34	74
J-519	1,290.31	0	1,457.19	72
J-520	1,293.47	7	1,457.17	71
J-524	1,281.77	0	1,457.32	76
J-526	1,287.21	0	1,457.34	74
J-528	1,289.60	0	1,457.34	73
J-531	1,281.18	0	1,457.31	76
J-532	1,287.52	0	1,457.18	73
J-533	1,294.10	0	1,457.18	71
J-534	1,293.74	0	1,457.18	71
J-535	1,287.45	0	1,457.34	74
J-536	1,287.54	0	1,457.34	73
J-537	1,288.06	4	1,457.34	73



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-543	1,285.32	0	1,457.18	74
J-544	1,290.00	2	1,457.33	72
J-546	1,286.30	0	1,457.32	74
J-547	1,281.20	3	1,457.11	76
J-550	1,288.60	0	1,457.33	73
J-552	1,299.98	0	1,457.34	68
J-557	1,284.17	0	1,457.18	75
J-558	1,282.88	5	1,457.10	75
J-559	1,282.73	0	1,457.10	75
J-560	1,282.06	2	1,457.11	76
J-561	1,283.24	5	1,457.12	75
J-562	1,286.82	0	1,457.36	74
J-563	1,290.00	0	1,457.18	72
J-565	1,285.36	0	1,457.16	74
J-568	1,287.63	0	1,457.36	73
J-571	1,293.10	0	1,457.18	71
J-572	1,282.00	0	1,457.11	76
J-573	1,292.36	1	1,457.33	71
J-578	1,294.30	16	1,457.34	71
J-579	1,280.00	0	1,457.27	77
J-580	1,290.00	0	1,457.18	72
J-581	1,287.61	8	1,457.36	73
J-582	1,280.00	0	1,457.13	77
J-583	1,286.49	0	1,457.34	74
J-585	1,290.00	7	1,457.18	72
J-588	1,296.06	15	1,457.33	70
J-590	1,284.18	7	1,457.13	75
J-592	1,290.15	0	1,457.19	72
J-593	1,290.05	0	1,457.20	72
J-594	1,280.96	0	1,457.10	76
J-596	1,287.73	0	1,457.34	73
J-597	1,280.52	0	1,457.18	76
J-598	1,283.73	0	1,457.33	75
J-599	1,282.35	0	1,457.32	76
J-600	1,289.29	2	1,457.24	73
J-602	1,280.00	0	1,457.25	77
J-605	1,280.25	9	1,457.11	77
J-606	1,280.72	3	1,457.11	76
J-607	1,282.85	0	1,457.33	75
J-608	1,289.62	29	1,457.18	72
J-609	1,284.63	3	1,457.17	75
J-610	1,298.28	0	1,457.34	69
J-613	1,287.22	6	1,457.35	74



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-614	1,286.42	1	1,457.28	74
J-615	1,284.29	0	1,457.13	75
J-616	1,287.06	14	1,457.13	74
J-617	1,294.88	3	1,457.33	70
J-618	1,297.09	0	1,457.34	69
J-619	1,291.42	0	1,457.18	72
J-620	1,280.00	0	1,457.18	77
J-623	1,287.65	0	1,457.18	73
J-624	1,294.76	0	1,457.18	70
J-625	1,287.04	0	1,457.18	74
J-626	1,300.00	0	1,457.34	68
J-627	1,280.00	0	1,457.18	77
J-628	1,282.30	0	1,457.18	76
J-629	1,287.12	5	1,457.18	74
J-630	1,287.21	5	1,457.18	74
J-632	1,287.88	10	1,457.13	73
J-633	1,285.82	5	1,457.12	74
J-635	1,300.00	0	1,457.34	68
J-638	1,293.02	0	1,457.34	71
J-639	1,293.71	0	1,457.18	71
J-640	1,293.11	0	1,457.18	71
J-641	1,293.07	0	1,457.18	71
J-642	1,290.16	0	1,457.19	72
J-643	1,290.00	0	1,457.34	72
J-646	1,287.37	0	1,457.33	74
J-648	1,283.82	6	1,457.12	75
J-649	1,289.38	0	1,457.34	73
J-651	1,290.10	5	1,457.14	72
J-652	1,289.27	0	1,457.24	73
J-661	1,300.00	0	1,457.34	68
J-662	1,287.37	0	1,457.34	74
J-664	1,300.00	5	1,457.35	68
J-667	1,282.25	0	1,457.18	76
J-673	1,294.74	0	1,457.18	70
J-1	1,280.00	0	1,457.19	77
J-2	1,280.00	0	1,457.19	77
J-5	1,280.32	0	1,457.18	77
J-6	1,280.33	0	1,457.18	77
J-7	1,280.26	0	1,457.18	77
J-8	1,280.27	0	1,457.18	77
J-9	1,280.00	0	1,457.18	77
J-10	1,280.00	0	1,457.18	77
J-13	1,280.00	0	1,457.18	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-14	1,280.00	0	1,457.18	77
J-15	1,280.00	0	1,457.19	77
J-16	1,280.00	0	1,457.19	77
J-17	1,280.00	0	1,457.19	77
J-18	1,280.00	0	1,457.19	77
J-19	1,280.00	0	1,457.19	77
J-20	1,280.00	0	1,457.19	77
J-21	1,280.00	0	1,457.25	77
J-22	1,280.00	0	1,457.25	77
J-23	1,280.20	0	1,457.18	77
J-24	1,280.23	0	1,457.18	77
J-33	1,280.00	0	1,457.18	77
J-34	1,280.00	0	1,457.18	77
J-43	1,280.00	0	1,457.18	77
J-44	1,280.00	0	1,457.18	77
J-47	1,280.00	0	1,457.18	77
J-48	1,280.00	0	1,457.18	77
J-49	1,280.29	0	1,457.18	77
J-50	1,280.32	0	1,457.18	77
J-51	1,283.91	0	1,457.18	75
J-52	1,283.91	0	1,457.18	75
J-53	1,281.92	0	1,457.18	76
J-54	1,281.95	0	1,457.18	76
J-55	1,280.00	0	1,457.18	77
J-56	1,280.00	0	1,457.18	77
J-61	1,280.00	0	1,457.18	77
J-62	1,280.00	0	1,457.18	77
J-63	1,280.00	0	1,457.24	77
J-64	1,280.00	0	1,457.24	77
J-65	1,280.00	0	1,457.26	77
J-66	1,280.00	0	1,457.26	77
J-67	1,280.00	0	1,457.19	77
J-68	1,280.00	0	1,457.19	77
J-69	1,280.00	0	1,457.19	77
J-70	1,280.00	0	1,457.19	77
J-71	1,280.00	0	1,457.21	77
J-72	1,280.00	0	1,457.21	77
J-73	1,280.00	0	1,457.20	77
J-74	1,280.00	0	1,457.20	77
J-77	1,280.00	0	1,457.21	77
J-78	1,280.00	0	1,457.21	77
J-81	1,280.00	0	1,457.20	77
J-82	1,280.00	0	1,457.20	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-85	1,280.00	0	1,457.18	77
J-86	1,280.00	0	1,457.18	77
J-91	1,280.00	0	1,457.19	77
J-101	1,280.00	0	1,457.21	77
J-102	1,280.00	0	1,457.21	77
J-106	1,280.00	0	1,457.19	77
J-107	1,280.00	0	1,457.19	77
J-120	1,280.41	0	1,457.18	76
J-121	1,280.41	0	1,457.18	76
J-125	1,280.00	0	1,457.18	77
J-126	1,280.00	0	1,457.18	77
J-129	1,286.89	0	1,457.18	74
J-131	1,280.34	0	1,457.18	77
J-132	1,280.25	0	1,457.18	77
J-137	1,280.00	0	1,457.18	77
J-138	1,280.00	0	1,457.18	77
J-139	1,280.00	0	1,457.18	77
J-140	1,280.00	0	1,457.18	77
J-142	1,280.00	0	1,457.18	77
J-143	1,280.00	0	1,457.18	77
J-150	1,280.00	0	1,457.18	77
J-151	1,280.00	0	1,457.18	77
J-152	1,280.00	0	1,457.18	77
J-153	1,280.00	0	1,457.18	77
J-154	1,280.00	0	1,457.18	77
J-155	1,280.00	0	1,457.18	77
J-156	1,280.00	0	1,457.18	77
J-157	1,280.00	0	1,457.18	77
J-163	1,280.00	0	1,457.22	77
J-164	1,280.00	0	1,457.22	77
J-165	1,280.00	0	1,457.20	77
J-166	1,280.00	0	1,457.20	77
J-167	1,280.00	0	1,457.27	77
J-168	1,280.00	0	1,457.20	77
J-169	1,280.00	0	1,457.20	77
J-171	1,280.00	0	1,457.18	77
J-172	1,280.00	0	1,457.18	77
J-177	1,280.00	0	1,457.18	77
J-178	1,280.00	0	1,457.18	77
J-181	1,284.14	0	1,457.18	75
J-185	1,280.00	0	1,457.19	77
J-186	1,280.00	0	1,457.19	77
J-189	1,280.00	0	1,457.19	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-190	1,280.00	0	1,457.19	77
J-191	1,280.00	0	1,457.18	77
J-192	1,280.00	0	1,457.18	77
J-193	1,280.00	0	1,457.18	77
J-194	1,280.00	0	1,457.18	77
J-195	1,280.46	0	1,457.18	76
J-196	1,280.32	0	1,457.18	77
J-197	1,283.77	0	1,457.18	75
J-200	1,280.00	0	1,457.18	77
J-201	1,280.00	0	1,457.18	77
J-202	1,280.09	0	1,457.18	77
J-203	1,280.00	0	1,457.18	77
J-204	1,280.11	0	1,457.18	77
J-209	1,280.12	0	1,457.18	77
J-210	1,280.00	0	1,457.18	77
J-212	1,280.00	0	1,457.18	77
J-213	1,280.00	0	1,457.18	77
J-214	1,280.00	0	1,457.18	77
J-215	1,280.00	0	1,457.18	77
J-222	1,280.21	0	1,457.18	77
J-223	1,280.00	0	1,457.19	77
J-224	1,280.00	0	1,457.18	77
J-225	1,280.00	0	1,457.18	77
J-226	1,280.00	0	1,457.18	77
J-227	1,280.00	0	1,457.18	77
J-229	1,284.25	0	1,457.18	75
J-231	1,280.00	0	1,457.19	77
J-232	1,285.15	0	1,457.18	74
J-233	1,285.17	0	1,457.18	74
J-235	1,281.81	0	1,457.18	76
J-237	1,283.17	0	1,457.18	75
J-239	1,285.61	0	1,457.18	74
J-242	1,286.43	0	1,457.18	74
J-244	1,280.00	0	1,457.18	77
J-245	1,280.00	0	1,457.18	77
J-246	1,280.00	0	1,457.20	77
J-247	1,280.00	0	1,457.20	77
J-250	1,283.79	0	1,457.18	75
J-254	1,280.26	0	1,457.18	77
J-255	1,280.53	0	1,457.18	76
J-260	1,280.00	0	1,457.18	77
J-262	1,280.08	0	1,457.18	77
J-263	1,280.02	0	1,457.18	77



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-266	1,280.00	0	1,457.18	77
J-268	1,280.56	0	1,457.18	76
J-270	1,280.00	0	1,457.18	77
J-272	1,285.07	0	1,457.18	74
J-276	1,280.00	0	1,457.18	77
J-277	1,280.00	0	1,457.18	77
J-282	1,283.67	0	1,457.18	75
J-284	1,280.00	0	1,457.19	77
J-287	1,280.00	0	1,457.19	77
J-291	1,280.00	0	1,457.25	77
J-293	1,280.00	0	1,457.23	77
J-296	1,280.00	0	1,457.20	77
J-297	1,280.00	0	1,457.22	77
J-298	1,280.00	0	1,457.19	77
J-301	1,280.00	0	1,457.21	77
J-302	1,280.00	0	1,457.21	77
J-312	1,280.00	0	1,457.18	77
J-321	1,280.00	0	1,457.21	77
J-322	1,280.00	0	1,457.21	77
J-324	1,280.00	0	1,457.25	77
J-325	1,280.00	0	1,457.23	77
J-326	1,280.00	0	1,457.18	77
J-327	1,280.00	0	1,457.19	77
J-331	1,280.00	0	1,457.18	77
J-332	1,280.00	0	1,457.19	77
J-336	1,280.00	0	1,457.19	77
J-340	1,280.00	0	1,457.18	77
J-343	1,280.00	0	1,457.18	77
J-349	1,280.00	0	1,457.19	77
J-353	1,280.00	0	1,457.21	77
J-355	1,280.00	0	1,457.21	77
J-363	1,280.00	0	1,457.20	77
J-365	1,280.00	0	1,457.21	77
J-366	1,280.55	0	1,457.18	76
J-367	1,280.00	0	1,457.18	77
J-370	1,280.00	0	1,457.20	77
J-372	1,280.00	0	1,457.18	77
J-373	1,280.00	0	1,457.18	77
J-375	1,280.00	0	1,457.18	77
J-378	1,280.00	0	1,457.23	77
J-380	1,291.16	9	1,457.32	72
J-381	1,290.64	7	1,457.31	72
J-382	1,291.34	8	1,457.31	72



Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-383	1,292.53	9	1,457.31	71
J-384	1,293.13	5	1,457.31	71
J-385	1,291.24	6	1,457.31	72
J-386	1,292.88	6	1,457.31	71
J-387	1,290.03	5	1,457.21	72
J-389	1,298.00	7	1,457.33	69
J-401	1,294.11	0	1,457.18	71
J-403	1,296.44	9	1,457.32	70
J-404	1,300.00	0	1,457.34	68
J-405	1,287.46	0	1,457.35	74
J-406	1,293.77	16	1,457.30	71
J-407	1,296.91	9	1,457.32	69
J-408	1,297.02	0	1,457.34	69
J-409	1,289.32	0	1,457.31	73
J-410	1,287.47	10	1,457.31	73
J-411	1,282.10	0	1,457.12	76
J-412	1,287.12	0	1,457.18	74
J-413	1,287.12	0	1,457.18	74
J-414	1,282.85	0	1,457.10	75
J-415	1,282.85	0	1,457.10	75
J-416	1,280.25	0	1,457.11	77
J-418	1,280.25	0	1,457.11	77
J-419	1,282.07	0	1,457.12	76
J-421	1,300.00	3	1,457.35	68
J-422	1,298.51	10	1,457.33	69
J-423	1,291.83	12	1,457.31	72
J-424	1,292.44	8	1,457.31	71
J-425	1,294.41	8	1,457.30	70
J-426	1,295.42	17	1,457.30	70
J-427	1,292.40	16	1,457.29	71
J-428	1,291.27	15	1,457.29	72
J-429	1,290.15	15	1,457.30	72
J-430	1,290.74	11	1,457.29	72
J-431	1,296.44	10	1,457.33	70
J-433	1,280.00	0	1,457.10	77
J-434	1,280.00	0	1,457.10	77

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
1907	1,015	J-661	J-626	30	Ductile Iron	130	0	96	0.04
1908	62	J-464	J-465	12	Ductile Iron	130	0	-96	0.27
3565	8	J-166	J-167	6	Ductile Iron	130	0	0	0
3566	6	J-105	J-106	6	Ductile Iron	130	0	0	0
3961	6	J-93	J-94	6	Ductile Iron	130	0	0	0
3962	49	J-15	J-326	16	Ductile Iron	130	0	3	0
3963	2	J-15	J-16	16	Ductile Iron	130	0	-3	0
3983	526	J-573	J-544	8	Ductile Iron	130	0	12	0.08
4153	512	J-618	J-610	8	Ductile Iron	130	0	-17	0.11
4154	14	J-215	J-216	6	Ductile Iron	130	0	0	0
4308	289	J-585	J-78	8	Ductile Iron	130	0	-6	0.04
4311	9	J-189	J-190	8	Ductile Iron	130	0	0	0
8447	57	J-68	J-342	16	Ductile Iron	130	0	0	0
8449	40	J-382	J-67	16	Ductile Iron	130	0	-72	0.11
8823	20	J-302	J-70	12	Ductile Iron	130	0	0	0
8825	75	J-478	J-322	12	Ductile Iron	130	0	-24	0.07
12390	66	J-465	J-393	12	Ductile Iron	130	0	17	0.05
12392	31	J-338	J-339	6	Ductile Iron	130	0	0	0
12393	297	J-411	J-363	12	Ductile Iron	130	0	13	0.04
12397	682	J-367	J-646	6	Ductile Iron	130	0	11	0.12
12398	4	J-32	J-33	6	Ductile Iron	130	0	0	0
12401	236	J-550	J-32	6	Ductile Iron	130	0	-11	0.13
12402	1,024	J-502	J-550	6	Ductile Iron	130	0	-11	0.13
14458	206	J-561	J-476	8	Ductile Iron	130	0	39	0.25
14460	442	J-204	J-129	8	Ductile Iron	130	0	-7	0.05
14461	11	J-203	J-204	8	Ductile Iron	130	0	0	0
14462	7	J-128	J-129	6	Ductile Iron	130	0	0	0
14463	11	J-197	J-198	8	Ductile Iron	130	0	0	0
14465	447	J-565	J-561	8	Ductile Iron	130	0	57	0.36
14466	630	J-106	J-167	8	Ductile Iron	130	0	-15	0.1
14467	610	J-284	J-136	8	Ductile Iron	130	0	53	0.34
14477	525	J-624	J-533	6	Ductile Iron	130	0	-2	0.02
14478	694	J-27	J-425	8	Ductile Iron	130	0	-10	0.06
14479	657	J-639	J-640	6	Ductile Iron	130	0	-6	0.06
14481	658	J-641	J-642	6	Ductile Iron	130	0	-9	0.1
14483	8	J-179	J-180	8	Ductile Iron	130	0	0	0
14484	10	J-212	J-213	8	Ductile Iron	130	0	0	0
14485	5	J-81	J-82	6	Ductile Iron	130	0	0	0
14486	3	J-26	J-27	6	Ductile Iron	130	0	0	0
14487	3	J-24	J-25	6	Ductile Iron	130	0	0	0
14488	4	J-30	J-31	6	Ductile Iron	130	0	0	0
14494	1,330	J-646	J-501	6	Ductile Iron	130	0	11	0.12

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
14496	26	J-325	J-326	6	Ductile Iron	130	0	0	0
19501	5	J-23	J-24	16	Ductile Iron	130	0	0	0
19507	15	J-120	J-121	16	Ductile Iron	130	0	-49	0.08
19510	5	J-19	J-20	12	Ductile Iron	130	0	0	0
19511	5	J-17	J-18	12	Ductile Iron	130	0	0	0
19512	366	J-19	J-17	16	Ductile Iron	130	0	-49	0.08
19514	5	J-15	J-16	12	Ductile Iron	130	0	0	0
19515	413	J-15	J-298	16	Ductile Iron	130	0	-49	0.08
19516	88	J-298	J-185	16	Ductile Iron	130	0	-49	0.08
19517	25	J-185	J-186	16	Ductile Iron	130	0	-49	0.08
19520	39	J-186	J-231	16	Ductile Iron	130	0	-49	0.08
19522	25	J-189	J-190	12	Ductile Iron	130	0	-49	0.14
19526	2	J-7	J-8	0.8	Ductile Iron	130	0	0	0
19527	2	J-5	J-6	0.8	Ductile Iron	130	0	0	0
21371	649	J-385	J-400	16	Ductile Iron	130	0	-38	0.06
21372	659	J-426	J-421	16	Ductile Iron	130	0	-118	0.19
21374	349	J-439	J-432	16	Ductile Iron	130	0	-346	0.55
21395	53	J-428	J-429	6	Ductile Iron	130	0	0	0
21709	365	J-435	J-504	16	Ductile Iron	130	0	39	0.06
21710	85	J-496	J-355	16	Ductile Iron	130	0	28	0.04
21711	37	J-367	J-368	6	Ductile Iron	130	0	0	0
21712	13	J-232	J-233	6	Ductile Iron	130	0	0	0
21713	16	J-261	J-262	8	Ductile Iron	130	0	11	0.07
21714	4	J-4	J-5	6	Ductile Iron	130	0	11	0.12
21715	1	J-6	J-7	16	Ductile Iron	130	0	0	0
21716	6	J-115	J-116	6	Ductile Iron	130	0	-654	7.43
21717	1	J-1	J-3	16	Ductile Iron	130	0	0	0
21718	1	J-1	J-2	16	Ductile Iron	130	0	0	0
21719	26	J-323	J-324	6	Ductile Iron	130	0	0	0
21720	20	J-284	J-285	6	Ductile Iron	130	0	-51	0.57
21722	53	J-440	J-441	6	Ductile Iron	130	0	0	0
21723	38	J-369	J-370	6	Ductile Iron	130	0	0	0
21724	29	J-333	J-334	8	Ductile Iron	130	0	36	0.23
24188	60	J-458	J-459	6	Ductile Iron	130	0	0	0
24513	20	J-294	J-295	8	Ductile Iron	130	0	-1	0.01
24514	20	J-296	J-297	8	Ductile Iron	130	0	-3	0.02
24515	45	J-405	J-411	8	Ductile Iron	130	0	-3	0.02
24516	45	J-412	J-413	8	Ductile Iron	130	0	-3	0.02
24517	300	J-294	J-312	8	Ductile Iron	130	0	1	0.01
24518	303	J-296	J-479	8	Ductile Iron	130	0	3	0.02
24519	22	J-311	J-312	6	Ductile Iron	130	0	0	0
24520	74	J-479	J-480	8	Ductile Iron	130	0	3	0.02

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
25253	4	J-56	J-57	6	Ductile Iron	130	0	0	0
25254	6	J-36	J-37	6	Ductile Iron	130	0	-6	0.07
25255	6	J-87	J-88	6	Ductile Iron	130	0	0	0
25256	5	J-52	J-53	6	Ductile Iron	130	0	0	0
25257	5	J-65	J-66	6	Ductile Iron	130	0	0	0
25258	5	J-85	J-86	6	Ductile Iron	130	0	0	0
25283	7	J-154	J-155	4	Ductile Iron	130	0	0	0
25284	7	J-152	J-153	8	Ductile Iron	130	0	0	0
25565	445	J-107	J-13	8	Ductile Iron	130	0	-12	0.07
25566	6	J-107	J-108	6	Ductile Iron	130	0	0	0
25595	7	J-77	J-78	6	Ductile Iron	130	0	0	0
27024	49	J-254	J-255	16	Ductile Iron	130	0	49	0.08
27025	34	J-23	J-222	16	Ductile Iron	130	0	0	0
27504	117	J-393	J-162	8	Ductile Iron	130	0	0	0
27505	10	J-162	J-163	6	Ductile Iron	130	0	0	0
27906	504	J-281	J-505	8	Ductile Iron	130	0	18	0.11
27908	632	J-505	J-402	8	Ductile Iron	130	0	18	0.11
27909	12	J-199	J-200	6	Ductile Iron	130	0	0	0
28144	138	J-516	J-544	8	Ductile Iron	130	0	13	0.08
29987	75	J-483	J-336	6	Ductile Iron	130	0	0	0
29988	30	J-336	J-337	6	Ductile Iron	130	0	0	0
30003	6	J-69	J-70	12	Ductile Iron	130	0	0	0
30004	115	J-526	J-462	8	Ductile Iron	130	0	0	0
30005	310	J-583	J-526	16	Ductile Iron	130	0	70	0.11
30006	273	J-537	J-205	16	Ductile Iron	130	0	59	0.09
30007	9	J-195	J-196	6	Ductile Iron	130	0	-11	0.13
30009	45	J-409	J-410	6	Ductile Iron	130	0	0	0
30010	683	J-205	J-643	16	Ductile Iron	130	0	48	0.08
30011	647	J-643	J-22	16	Ductile Iron	130	0	-2	0
30012	3	J-22	J-23	12	Ductile Iron	130	0	38	0.11
30015	640	J-22	J-638	16	Ductile Iron	130	0	-39	0.06
30017	3	J-20	J-21	8	Ductile Iron	130	0	0	0
30021	617	J-635	J-484	16	Ductile Iron	130	0	-72	0.11
30023	21	J-292	J-293	6	Ductile Iron	130	0	0	0
30389	117	J-524	J-531	12	Ductile Iron	130	0	113	0.32
30390	19	J-252	J-253	6	Ductile Iron	130	0	0	0
30392	88	J-499	J-278	12	Ductile Iron	130	0	0	0
30393	435	J-599	J-607	16	Ductile Iron	130	0	-113	0.18
30394	14	J-259	J-260	6	Ductile Iron	130	0	0	0
30395	8	J-173	J-174	6	Ductile Iron	130	0	0	0
30397	358	J-598	J-509	16	Ductile Iron	130	0	-113	0.18
30398	98	J-509	J-510	6	Ductile Iron	130	0	0	0

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30399	398	J-509	J-346	16	Ductile Iron	130	0	-113	0.18
30400	105	J-346	J-518	16	Ductile Iron	130	0	52	0.08
30401	102	J-513	J-514	6	Ductile Iron	130	0	0	0
40954	162	J-407	J-552	8	Ductile Iron	130	0	2	0.02
40955	166	J-511	J-412	8	Ductile Iron	130	0	-3	0.02
40956	54	J-407	J-408	6	Ductile Iron	130	0	0	0
40957	6	J-117	J-118	6	Ductile Iron	130	0	0	0
40958	19	J-286	J-287	6	Ductile Iron	130	0	0	0
44165	278	J-79	J-28	12	Ductile Iron	130	0	49	0.14
44167	5	J-79	J-80	6	Ductile Iron	130	0	0	0
44168	5	J-75	J-76	6	Ductile Iron	130	0	0	0
44169	8	J-35	J-170	6	Ductile Iron	130	0	0	0
45230	35	J-190	J-223	12	Ductile Iron	130	0	-49	0.14
45231	13	J-106	J-107	1	Ductile Iron	130	0	0	0
45232	8	J-67	J-68	6	Ductile Iron	130	0	0	0
45234	8	J-69	J-70	6	Ductile Iron	130	0	0	0
45236	22	J-165	J-166	12	Ductile Iron	130	0	-49	0.14
45237	293	J-166	J-363	12	Ductile Iron	130	0	-49	0.14
45238	10	J-81	J-82	6	Ductile Iron	130	0	0	0
45239	8	J-73	J-74	6	Ductile Iron	130	0	0	0
45241	22	J-168	J-169	12	Ductile Iron	130	0	-49	0.14
45242	148	J-169	J-296	12	Ductile Iron	130	0	-49	0.14
45245	10	J-77	J-78	6	Ductile Iron	130	0	0	0
45247	89	J-301	J-302	6	Ductile Iron	130	0	0	0
45248	106	J-321	J-246	8	Ductile Iron	130	0	57	0.37
45249	8	J-71	J-72	6	Ductile Iron	130	0	0	0
45251	13	J-101	J-102	1	Ductile Iron	130	0	0	0
45252	85	J-297	J-163	12	Ductile Iron	130	0	-106	0.3
45253	22	J-163	J-164	12	Ductile Iron	130	0	-106	0.3
45257	8	J-63	J-64	6	Ductile Iron	130	0	0	0
45260	5	J-21	J-22	1	Ductile Iron	130	0	0	0
45261	107	J-324	J-602	8	Ductile Iron	130	0	0	0
45262	8	J-65	J-66	6	Ductile Iron	130	0	0	0
45263	277	J-65	J-167	12	Ductile Iron	130	0	-106	0.3
45264	22	J-167	J-579	12	Ductile Iron	130	0	-106	0.3
45268	9	J-183	J-184	6	Ductile Iron	130	0	0	0
45271	5	J-73	J-74	1	Ductile Iron	130	0	0	0
45410	41	J-377	J-378	8	Ductile Iron	130	0	0	0
45970	15	J-264	J-265	6	Ductile Iron	130	0	5	0.06
45972	7	J-136	J-137	6	Ductile Iron	130	0	0	0
45973	37	J-365	J-366	6	Ductile Iron	130	0	0	0
45975	38	J-373	J-374	6	Ductile Iron	130	0	0	0

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
45998	55	J-61	J-266	8	Ductile Iron	130	0	0	0
45999	7	J-61	J-62	8	Ductile Iron	130	0	0	0
47269	114	J-512	J-227	8	Ductile Iron	130	0	57	0.37
47271	9	J-144	J-145	6	Ductile Iron	130	0	0	0
47272	140	J-144	J-181	8	Ductile Iron	130	0	57	0.37
47273	9	J-181	J-182	8	Ductile Iron	130	0	0	0
47274	60	J-181	J-460	8	Ductile Iron	130	0	0	0
47275	37	J-371	J-372	6	Ductile Iron	130	0	0	0
47276	93	J-371	J-500	8	Ductile Iron	130	0	24	0.15
47278	41	J-389	J-390	8	Ductile Iron	130	0	0	0
47279	672	J-389	J-547	8	Ductile Iron	130	0	22	0.14
47305	50	J-355	J-430	8	Ductile Iron	130	0	7	0.05
47310	52	J-435	J-40	8	Ductile Iron	130	0	0	0
47311	4	J-40	J-41	6	Ductile Iron	130	0	0	0
47325	96	J-398	J-504	8	Ductile Iron	130	0	0	0
47327	42	J-398	J-399	6	Ductile Iron	130	0	0	0
48023	23	J-177	J-178	6	Ductile Iron	130	0	0	0
48024	140	J-343	J-150	8	Ductile Iron	130	0	2	0.01
48025	20	J-150	J-151	8	Ductile Iron	130	0	2	0.01
48027	2	J-9	J-10	8	Ductile Iron	130	0	0	0
48028	16	J-125	J-126	6	Ductile Iron	130	0	0	0
48211	7	J-138	J-139	6	Ductile Iron	130	0	0	0
48212	7	J-140	J-141	6	Ductile Iron	130	0	0	0
48213	20	J-305	J-306	8	Ductile Iron	130	0	0	0
55557	98	J-276	J-277	12	Ductile Iron	130	0	12	0.03
55562	20	J-152	J-153	8	Ductile Iron	130	0	0	0
55563	19	J-142	J-143	6	Ductile Iron	130	0	0	0
55564	50	J-260	J-194	8	Ductile Iron	130	0	0	0
55565	18	J-137	J-138	8	Ductile Iron	130	0	0	0
55569	26	J-204	J-132	8	Ductile Iron	130	0	0	0
55570	17	J-131	J-132	8	Ductile Iron	130	0	0	0
55571	28	J-209	J-210	6	Ductile Iron	130	0	0	0
55572	26	J-202	J-203	8	Ductile Iron	130	0	0	0
55574	55	J-597	J-268	8	Ductile Iron	130	0	0	0
55575	26	J-195	J-196	8	Ductile Iron	130	0	0	0
55577	9	J-55	J-56	6	Ductile Iron	130	0	0	0
55578	8	J-49	J-50	6	Ductile Iron	130	0	0	0
55979	260	J-448	J-450	12	Ductile Iron	130	0	17	0.05
55980	56	J-450	J-451	8	Ductile Iron	130	0	0	0
55981	56	J-448	J-449	8	Ductile Iron	130	0	0	0
55982	8	J-134	J-135	6	Ductile Iron	130	0	0	0
55983	258	J-543	J-453	12	Ductile Iron	130	0	-12	0.03

Pipe Table

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
55984	58	J-453	J-454	8	Ductile Iron	130	0	0	0
55985	10	J-160	J-161	99	Ductile Iron	130	0	0	0
55986	196	J-146	J-557	12	Ductile Iron	130	0	-12	0.03
55987	9	J-146	J-147	6	Ductile Iron	130	0	0	0
55988	63	J-469	J-470	8	Ductile Iron	130	0	0	0
55989	352	J-597	J-315	12	Ductile Iron	130	0	12	0.03
55990	63	J-315	J-466	8	Ductile Iron	130	0	0	0
55991	10	J-150	J-151	6	Ductile Iron	130	0	0	0
55992	69	J-276	J-375	12	Ductile Iron	130	0	0	0
55993	16	J-276	J-277	16	Ductile Iron	130	0	19	0.03
55994	510	J-276	J-623	16	Ductile Iron	130	0	-37	0.06
56000	304	J-239	J-272	16	Ductile Iron	130	0	-37	0.06
56001	67	J-272	J-232	12	Ductile Iron	130	0	0	0
56003	332	J-235	J-255	16	Ductile Iron	130	0	-49	0.08
56010	9	J-51	J-52	6	Ductile Iron	130	0	0	0
56014	9	J-53	J-54	6	Ductile Iron	130	0	0	0
56016	30	J-212	J-213	8	Ductile Iron	130	0	0	0
56018	32	J-214	J-215	8	Ductile Iron	130	0	0	0
56021	6	J-13	J-14	6	Ductile Iron	130	0	0	0
56023	8	J-43	J-44	6	Ductile Iron	130	0	0	0
56024	23	J-171	J-172	8	Ductile Iron	130	0	2	0.01
56025	21	J-157	J-154	8	Ductile Iron	130	0	0	0
56028	8	J-47	J-48	6	Ductile Iron	130	0	0	0
60881	220	J-498	J-562	8	Ductile Iron	130	0	-37	0.24
60885	31	J-340	J-341	6	Ductile Iron	130	0	0	0
64961	16	J-271	J-272	6	Ductile Iron	130	0	0	0
64963	6	J-123	J-124	99	Ductile Iron	130	0	-202	0.01
75508	481	J-262	J-613	8	Ductile Iron	130	0	6	0.04
76924	6	J-125	J-126	6	Ductile Iron	130	0	0	0
76925	34	J-356	J-357	6	Ductile Iron	130	0	6	0.07
89634	50	J-431	J-432	6	Ductile Iron	130	0	0	0
89638	55	J-298	J-444	16	Ductile Iron	130	0	19	0.03
89640	53	J-442	J-443	8	Ductile Iron	130	0	-12	0.08
89641	13	J-242	J-243	6	Ductile Iron	130	0	0	0
89642	14	J-256	J-240	6	Ductile Iron	130	0	0	0
89643	14	J-254	J-255	6	Ductile Iron	130	0	0	0
89644	32	J-349	J-350	16	Ductile Iron	130	0	-22	0.04
89646	9	J-187	J-188	16	Ductile Iron	130	0	22	0.03
90048	53	J-438	J-439	10	Ductile Iron	130	0	-93	0.38
96761	14	J-185	J-257	10	Ductile Iron	130	0	0	0
96762	9	J-185	J-186	10	Ductile Iron	130	0	0	0
98803	117	J-532	J-485	12	Ductile Iron	130	0	0	0

Pipe Table

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
98804	1,475	J-532	J-667	12	Ductile Iron	130	0	0	0
98805	315	J-667	J-366	12	Ductile Iron	130	0	0	0
98806	944	J-366	J-627	12	Ductile Iron	130	0	0	0
98807	584	J-627	J-628	12	Ductile Iron	130	0	0	0
99201	13	J-186	J-239	12	Ductile Iron	130	0	0	0
99202	504	J-620	J-236	24	Ductile Iron	130	0	0	0
99203	26	J-239	J-236	12	Ductile Iron	130	0	0	0
99204	21	J-156	J-620	12	Ductile Iron	130	0	0	0
99205	19	J-235	J-236	1	Ductile Iron	130	0	0	0
105743	8	J-132	J-133	6	Ductile Iron	130	0	0	0
105756	9	J-142	J-143	6	Ductile Iron	130	0	0	0
105757	21	J-64	J-307	12	Ductile Iron	130	0	0	0
105758	123	J-307	J-537	12	Ductile Iron	130	0	0	0
105759	17	J-280	J-63	12	Ductile Iron	130	0	0	0
105760	5	J-63	J-64	12	Ductile Iron	130	0	0	0
105761	19	J-290	J-291	8	Ductile Iron	130	0	18	0.12
105762	61	J-462	J-463	8	Ductile Iron	130	0	0	0
105763	198	J-463	J-535	8	Ductile Iron	130	0	0	0
105765	120	J-535	J-164	8	Ductile Iron	130	0	0	0
105766	8	J-164	J-165	6	Ductile Iron	130	0	0	0
105767	349	J-164	J-596	8	Ductile Iron	130	0	0	0
141981	27	J-330	J-290	8	Ductile Iron	130	0	18	0.12
141982	121	J-330	J-536	8	Ductile Iron	130	0	-18	0.12
141984	44	J-403	J-404	6	Ductile Iron	130	0	0	0
141985	6	J-97	J-98	6	Ductile Iron	130	0	16	0.18
141986	6	J-95	J-96	6	Ductile Iron	130	0	0	0
141987	138	J-472	J-99	8	Ductile Iron	130	0	-6	0.04
141988	11	J-217	J-218	6	Ductile Iron	130	0	-6	0.07
141989	6	J-99	J-100	6	Ductile Iron	130	0	0	0
141990	227	J-498	J-467	6	Ductile Iron	130	0	9	0.1
141991	63	J-467	J-468	6	Ductile Iron	130	0	6	0.07
141994	5	J-83	J-84	6	Ductile Iron	130	0	0	0
141995	6	J-101	J-102	6	Ductile Iron	130	0	0	0
144879	5	J-67	J-68	16	Ductile Iron	130	0	0	0
158638	6	J-33	J-34	6	Ductile Iron	130	0	0	0
158639	43	J-244	J-245	6	Ductile Iron	130	0	0	0
158640	35	J-224	J-225	8	Ductile Iron	130	0	2	0.01
158649	26	J-193	J-194	8	Ductile Iron	130	0	0	0
158650	65	J-140	J-193	8	Ductile Iron	130	0	0	0
158651	18	J-139	J-140	8	Ductile Iron	130	0	0	0
158652	20	J-154	J-155	8	Ductile Iron	130	0	0	0
158653	25	J-191	J-192	6	Ductile Iron	130	0	0	0

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
158654	148	J-155	J-200	8	Ductile Iron	130	0	0	0
158655	26	J-200	J-201	8	Ductile Iron	130	0	0	0
159024	35	J-226	J-227	8	Ductile Iron	130	0	2	0.01
159026	11	J-85	J-86	6	Ductile Iron	130	0	0	0
174392	80	J-491	J-492	8	Ductile Iron	130	0	0	0
174802	41	J-395	J-396	4	Ductile Iron	130	0	0	0
174803	27	J-155	J-327	4	Ductile Iron	130	0	0	0
189468	7	J-148	J-149	6	Ductile Iron	130	0	0	0
189469	131	J-279	J-130	12	Ductile Iron	130	0	0	0
189470	6	J-130	J-131	12	Ductile Iron	130	0	0	0
189472	197	J-559	J-437	12	Ductile Iron	130	0	-5	0.01
189473	16	J-273	J-274	6	Ductile Iron	130	0	0	0
189474	53	J-437	J-361	12	Ductile Iron	130	0	-5	0.01
189475	36	J-361	J-362	12	Ductile Iron	130	0	-5	0.01
189476	197	J-362	J-558	12	Ductile Iron	130	0	-11	0.03
189477	6	J-91	J-92	4	Ductile Iron	130	0	0	0
198398	147	J-417	J-286	8	Ductile Iron	130	0	2	0.01
203870	6	J-2	J-19	16	Ductile Iron	130	0	-49	0.08
203871	1	J-1	J-2	8	Ductile Iron	130	0	0	0
213052	70	J-475	J-219	8	Ductile Iron	130	0	7	0.05
213053	11	J-219	J-220	6	Ductile Iron	130	0	0	0
213054	388	J-219	J-418	8	Ductile Iron	130	0	5	0.03
213055	47	J-418	J-419	8	Ductile Iron	130	0	0	0
225318	10	J-196	J-205	6	Ductile Iron	130	0	-11	0.13
228582	4	J-34	J-35	8	Ductile Iron	130	0	5	0.03
228583	329	J-594	J-34	8	Ductile Iron	130	0	5	0.03
229343	12	J-12	J-234	12	Ductile Iron	130	0	35	0.1
229344	4	J-28	J-29	8	Ductile Iron	130	0	49	0.31
229345	6	J-29	J-10	8	Ductile Iron	130	0	49	0.31
229346	2	J-10	J-11	12	Ductile Iron	130	0	35	0.1
229347	2	J-11	J-12	12	Ductile Iron	130	0	35	0.1
239091	40	J-232	J-233	12	Ductile Iron	130	0	0	0
239094	15	J-243	J-263	6	Ductile Iron	130	0	0	0
239098	13	J-240	J-241	6	Ductile Iron	130	0	0	0
239099	20	J-255	J-299	6	Ductile Iron	130	0	0	0
239483	168	J-552	J-117	8	Ductile Iron	130	0	2	0.02
239484	116	J-471	J-511	8	Ductile Iron	130	0	-3	0.02
239485	44	J-405	J-406	8	Ductile Iron	130	0	2	0.02
239487	158	J-536	J-404	8	Ductile Iron	130	0	-18	0.12
239884	557	J-573	J-617	8	Ductile Iron	130	0	-14	0.09
239886	455	J-610	J-394	8	Ductile Iron	130	0	-17	0.11
239888	37	J-363	J-364	12	Ductile Iron	130	0	-8	0.02

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
240694	84	J-406	J-407	8	Ductile Iron	130	0	2	0.02
240695	46	J-117	J-417	8	Ductile Iron	130	0	2	0.01
240696	69	J-286	J-471	8	Ductile Iron	130	0	-3	0.02
240697	441	J-483	J-107	8	Ductile Iron	130	0	-2	0.01
240700	70	J-472	J-473	8	Ductile Iron	130	0	-28	0.18
240701	101	J-99	J-217	8	Ductile Iron	130	0	-6	0.04
240702	199	J-526	J-475	16	Ductile Iron	130	0	70	0.11
240703	164	J-475	J-537	16	Ductile Iron	130	0	63	0.1
241094	155	J-547	J-477	8	Ductile Iron	130	0	19	0.12
241095	254	J-572	J-79	12	Ductile Iron	130	0	59	0.17
241097	229	J-565	J-106	8	Ductile Iron	130	0	-8	0.05
241098	453	J-167	J-609	8	Ductile Iron	130	0	-21	0.13
241101	204	J-560	J-204	8	Ductile Iron	130	0	-2	0.01
241104	61	J-461	J-371	8	Ductile Iron	130	0	24	0.15
241105	54	J-371	J-436	8	Ductile Iron	130	0	0	0
241106	102	J-181	J-461	8	Ductile Iron	130	0	57	0.37
241109	49	J-227	J-144	8	Ductile Iron	130	0	57	0.37
241111	44	J-246	J-247	8	Ductile Iron	130	0	57	0.37
241115	849	J-52	J-88	8	Ductile Iron	130	0	16	0.1
241117	572	J-632	J-633	8	Ductile Iron	130	0	20	0.13
241118	579	J-632	J-213	8	Ductile Iron	130	0	-30	0.19
241121	22	J-314	J-315	8	Ductile Iron	130	0	0	0
241122	226	J-557	J-469	12	Ductile Iron	130	0	-12	0.03
241123	116	J-453	J-146	12	Ductile Iron	130	0	-12	0.03
241127	443	J-444	J-608	16	Ductile Iron	130	0	19	0.03
241128	303	J-78	J-442	8	Ductile Iron	130	0	-12	0.08
241131	268	J-193	J-580	16	Ductile Iron	130	0	-22	0.04
241136	592	J-585	J-27	8	Ductile Iron	130	0	-1	0.01
241137	269	J-446	J-385	16	Ductile Iron	130	0	-22	0.03
241139	125	J-533	J-534	6	Ductile Iron	130	0	-2	0.02
241142	45	J-400	J-416	16	Ductile Iron	130	0	-76	0.12
241145	265	J-519	J-333	16	Ductile Iron	130	0	-164	0.26
241146	323	J-370	J-397	16	Ductile Iron	130	0	-202	0.32
241147	42	J-397	J-285	16	Ductile Iron	130	0	-202	0.32
241148	465	J-285	J-439	16	Ductile Iron	130	0	-253	0.4
241494	292	J-432	J-546	16	Ductile Iron	130	0	-346	0.55
241495	150	J-546	J-323	16	Ductile Iron	130	0	-346	0.55
241496	69	J-323	J-1	16	Ductile Iron	130	0	-346	0.55
241497	32	J-1	J-346	16	Ductile Iron	130	0	-346	0.55
241498	99	J-346	J-414	16	Ductile Iron	130	0	-510	0.81
241499	45	J-414	J-415	16	Ductile Iron	130	0	-510	0.81
241500	94	J-501	J-502	6	Ductile Iron	130	0	-11	0.13

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
241502	487	J-501	J-614	6	Ductile Iron	130	0	22	0.25
242703	326	J-592	J-593	6	Ductile Iron	130	0	-11	0.13
243096	18	J-281	J-16	16	Ductile Iron	130	0	3	0
243097	33	J-355	J-281	16	Ductile Iron	130	0	21	0.03
243100	127	J-504	J-233	16	Ductile Iron	130	0	39	0.06
243101	392	J-506	J-562	16	Ductile Iron	130	0	144	0.23
243898	52	J-434	J-38	8	Ductile Iron	130	0	0	0
243899	4	J-38	J-39	6	Ductile Iron	130	0	0	0
243900	60	J-457	J-42	8	Ductile Iron	130	0	0	0
243901	4	J-42	J-43	6	Ductile Iron	130	0	0	0
247576	10	J-13	J-214	8	Ductile Iron	130	0	-17	0.11
247577	2	J-13	J-14	6	Ductile Iron	130	0	0	0
247937	3	J-14	J-19	6	Ductile Iron	130	0	0	0
P-1	205	J-643	J-380	8	Ductile Iron	130	0	50	0.32
P-2	520	J-380	J-381	8	Ductile Iron	130	0	20	0.13
P-3	283	J-381	J-382	8	Ductile Iron	130	0	14	0.09
P-4	531	J-382	J-383	8	Ductile Iron	130	0	5	0.03
P-5	423	J-383	J-384	8	Ductile Iron	130	0	-10	0.06
P-6	283	J-384	J-385	8	Ductile Iron	130	0	-15	0.09
P-7	434	J-385	J-380	8	Ductile Iron	130	0	-20	0.13
P-10	155	J-383	J-386	8	Ductile Iron	130	0	6	0.04
P-11	501	J-593	J-387	6	Ductile Iron	130	0	-11	0.13
P-12	462	J-387	J-441	6	Ductile Iron	130	0	-16	0.18
P-15	655	J-363	J-389	8	Ductile Iron	130	0	22	0.14
P-16	635	J-389	J-588	8	Ductile Iron	130	0	15	0.1
P-31	31	R-2	PMP-2	99	Ductile Iron	130	0	654	0.03
P-32	42	PMP-2	J-116	99	Ductile Iron	130	0	654	0.03
P-34	72	R-3	PMP-3	99	Ductile Iron	130	0	0	0
P-35	80	PMP-3	J-161	99	Ductile Iron	130	0	0	0
P-36	26	R-1	PMP-1	99	Ductile Iron	130	0	202	0.01
P-37	25	PMP-1	J-124	99	Ductile Iron	130	0	202	0.01
P-38	45	J-350	J-401	16	Ductile Iron	130	0	-22	0.04
P-39	18	J-401	J-188	16	Ductile Iron	130	0	-22	0.03
P-41	336	J-401	J-673	6	Ductile Iron	130	0	-1	0.01
P-44	1	J-321	J-365	12	Ductile Iron	130	0	-79	0.22
P-47	379	J-237	J-235	16	Ductile Iron	130	0	-49	0.08
P-49	182	J-250	J-237	16	Ductile Iron	130	0	-49	0.08
P-50	242	J-272	J-229	16	Ductile Iron	130	0	-49	0.08
P-51	133	J-229	J-250	16	Ductile Iron	130	0	-49	0.08
P-53	186	J-242	J-239	16	Ductile Iron	130	0	-37	0.06
P-54	200	J-623	J-129	16	Ductile Iron	130	0	-37	0.06
P-55	115	J-129	J-242	16	Ductile Iron	130	0	-37	0.06

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-56	138	J-15	J-332	16	Ductile Iron	130	0	49	0.08
P-58	5	J-332	J-284	16	Ductile Iron	130	0	49	0.08
P-59	290	J-284	J-17	16	Ductile Iron	130	0	49	0.08
P-62	5	J-287	J-336	16	Ductile Iron	130	0	-49	0.08
P-63	658	J-336	J-2	16	Ductile Iron	130	0	-49	0.08
P-65	11	J-365	J-370	16	Ductile Iron	130	0	-202	0.32
P-74	54	J-326	J-430	6	Ductile Iron	130	0	3	0.03
P-75	644	J-430	J-367	6	Ductile Iron	130	0	11	0.12
P-78	4	J-15	J-94	16	Ductile Iron	130	0	0	0
P-85	17	J-378	J-325	12	Ductile Iron	130	0	-106	0.3
P-87	1	J-321	J-365	8	Ductile Iron	130	0	-27	0.17
P-90	70	J-296	J-322	12	Ductile Iron	130	0	-49	0.14
P-92	187	J-164	J-293	12	Ductile Iron	130	0	-106	0.3
P-93	49	J-293	J-378	12	Ductile Iron	130	0	-106	0.3
P-96	512	J-626	J-321	30	Ductile Iron	130	0	96	0.04
P-97	39	J-321	J-67	30	Ductile Iron	130	0	72	0.03
P-98	18	J-484	J-292	16	Ductile Iron	130	0	-72	0.11
P-99	62	J-292	J-382	16	Ductile Iron	130	0	-72	0.11
P-106	503	J-447	J-630	8	Ductile Iron	130	0	34	0.22
P-107	30	J-630	J-625	8	Ductile Iron	130	0	24	0.15
P-108	12	J-185	J-628	8	Ductile Iron	130	0	0	0
P-109	3	J-628	J-266	8	Ductile Iron	130	0	0	0
P-110	11	J-605	J-138	8	Ductile Iron	130	0	5	0.03
P-111	409	J-138	J-606	8	Ductile Iron	130	0	5	0.03
P-112	641	J-65	J-590	8	Ductile Iron	130	0	32	0.2
P-113	297	J-590	J-52	8	Ductile Iron	130	0	25	0.16
P-115	24	J-372	J-312	8	Ductile Iron	130	0	0	0
P-117	6	J-343	J-340	8	Ductile Iron	130	0	0	0
P-121	46	J-291	J-583	16	Ductile Iron	130	0	70	0.11
P-123	26	J-568	J-581	16	Ductile Iron	130	0	107	0.17
P-124	206	J-638	J-578	16	Ductile Iron	130	0	-39	0.06
P-125	433	J-578	J-20	16	Ductile Iron	130	0	-55	0.09
P-126	56	J-476	J-572	8	Ductile Iron	130	0	39	0.25
P-127	14	J-572	J-477	6	Ductile Iron	130	0	-19	0.22
P-128	5	J-322	J-355	12	Ductile Iron	130	0	-49	0.14
P-130	237	J-416	J-391	16	Ductile Iron	130	0	-76	0.12
P-131	10	J-391	J-571	16	Ductile Iron	130	0	-76	0.12
P-133	45	J-324	J-65	12	Ductile Iron	130	0	-106	0.3
P-134	561	J-562	J-6	16	Ductile Iron	130	0	107	0.17
P-135	4	J-6	J-568	16	Ductile Iron	130	0	107	0.17
P-146	662	J-616	J-37	8	Ductile Iron	130	0	-14	0.09
P-147	104	J-37	J-651	8	Ductile Iron	130	0	-20	0.13

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-148	17	J-393	J-339	8	Ductile Iron	130	0	17	0.11
P-149	24	J-339	J-394	8	Ductile Iron	130	0	17	0.11
P-150	73	J-633	J-190	8	Ductile Iron	130	0	15	0.1
P-151	617	J-190	J-648	8	Ductile Iron	130	0	10	0.07
P-152	52	J-32	J-195	6	Ductile Iron	130	0	-11	0.13
P-154	92	J-205	J-409	8	Ductile Iron	130	0	0	0
P-155	23	J-409	J-528	8	Ductile Iron	130	0	0	0
P-156	720	J-649	J-143	12	Ductile Iron	130	0	0	0
P-157	2	J-143	J-280	12	Ductile Iron	130	0	0	0
P-158	545	J-629	J-306	8	Ductile Iron	130	0	-5	0.03
P-159	18	J-306	J-630	6	Ductile Iron	130	0	-5	0.06
P-163	287	J-395	J-661	30	Ductile Iron	130	0	96	0.04
P-164	82	J-619	J-254	16	Ductile Iron	130	0	-22	0.04
P-165	465	J-254	J-349	16	Ductile Iron	130	0	-22	0.04
P-166	207	J-617	J-216	8	Ductile Iron	130	0	-17	0.11
P-167	293	J-216	J-618	8	Ductile Iron	130	0	-17	0.11
P-170	6	J-291	J-21	12	Ductile Iron	130	0	-106	0.3
P-171	61	J-21	J-324	12	Ductile Iron	130	0	-106	0.3
P-172	281	J-524	J-252	16	Ductile Iron	130	0	-113	0.18
P-173	90	J-252	J-599	16	Ductile Iron	130	0	-113	0.18
P-175	137	J-173	J-598	16	Ductile Iron	130	0	-113	0.18
P-176	44	J-597	J-49	12	Ductile Iron	130	0	-8	0.02
P-180	264	J-132	J-195	12	Ductile Iron	130	0	4	0.01
P-181	72	J-195	J-597	12	Ductile Iron	130	0	4	0.01
P-184	177	J-10	J-75	8	Ductile Iron	130	0	14	0.09
P-185	159	J-75	J-594	8	Ductile Iron	130	0	5	0.03
P-186	47	J-334	J-377	8	Ductile Iron	130	0	36	0.23
P-187	8	J-377	J-447	8	Ductile Iron	130	0	36	0.23
P-188	16	J-422	J-85	8	Ductile Iron	130	0	47	0.3
P-189	733	J-85	J-65	8	Ductile Iron	130	0	41	0.26
P-192	208	J-277	J-212	12	Ductile Iron	130	0	4	0.01
P-194	136	J-172	J-177	8	Ductile Iron	130	0	2	0.01
P-195	25	J-177	J-343	8	Ductile Iron	130	0	2	0.01
P-198	42	J-582	J-356	8	Ductile Iron	130	0	34	0.21
P-199	270	J-356	J-389	8	Ductile Iron	130	0	28	0.18
P-200	111	J-579	J-491	12	Ductile Iron	130	0	-106	0.3
P-201	157	J-491	J-487	12	Ductile Iron	130	0	-106	0.3
P-202	434	J-129	J-198	8	Ductile Iron	130	0	-12	0.08
P-203	19	J-198	J-561	8	Ductile Iron	130	0	-12	0.08
P-204	99	J-606	J-141	8	Ductile Iron	130	0	3	0.02
P-205	334	J-141	J-547	8	Ductile Iron	130	0	0	0
P-206	433	J-608	J-443	16	Ductile Iron	130	0	-10	0.02

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-207	44	J-443	J-563	16	Ductile Iron	130	0	-22	0.04
P-210	56	J-498	J-340	8	Ductile Iron	130	0	28	0.18
P-211	30	J-340	J-473	8	Ductile Iron	130	0	28	0.18
P-212	7	J-468	J-101	6	Ductile Iron	130	0	6	0.07
P-213	84	J-101	J-345	6	Ductile Iron	130	0	6	0.07
P-214	16	J-218	J-83	6	Ductile Iron	130	0	-6	0.07
P-215	16	J-83	J-345	6	Ductile Iron	130	0	-6	0.07
P-216	25	J-404	J-97	8	Ductile Iron	130	0	-18	0.12
P-218	32	J-97	J-95	8	Ductile Iron	130	0	-34	0.22
P-219	117	J-95	J-472	8	Ductile Iron	130	0	-34	0.22
P-220	18	J-415	J-115	16	Ductile Iron	130	0	-510	0.81
P-221	79	J-115	J-506	16	Ductile Iron	130	0	144	0.23
P-222	125	J-450	J-160	12	Ductile Iron	130	0	-12	0.03
P-223	13	J-160	J-543	12	Ductile Iron	130	0	-12	0.03
P-224	10	J-383	J-123	8	Ductile Iron	130	0	-199	1.27
P-225	30	J-123	J-384	8	Ductile Iron	130	0	3	0.02
P-226	34	J-212	J-331	12	Ductile Iron	130	0	4	0.01
P-228	176	J-331	J-214	12	Ductile Iron	130	0	4	0.01
P-230	85	J-214	J-13	12	Ductile Iron	130	0	4	0.01
P-231	168	J-13	J-375	12	Ductile Iron	130	0	4	0.01
P-235	55	J-301	J-321	12	Ductile Iron	130	0	-49	0.14
P-236	562	J-49	J-55	12	Ductile Iron	130	0	-8	0.02
P-237	37	J-55	J-277	12	Ductile Iron	130	0	-8	0.02
P-240	321	J-282	J-53	12	Ductile Iron	130	0	12	0.03
P-241	454	J-53	J-276	12	Ductile Iron	130	0	12	0.03
P-243	35	J-81	J-165	12	Ductile Iron	130	0	-49	0.14
P-245	153	J-69	J-349	12	Ductile Iron	130	0	-49	0.14
P-246	80	J-349	J-370	12	Ductile Iron	130	0	-49	0.14
P-247	91	J-370	J-81	12	Ductile Iron	130	0	-49	0.14
P-252	80	J-326	J-61	8	Ductile Iron	130	0	57	0.37
P-253	27	J-61	J-512	8	Ductile Iron	130	0	57	0.37
P-254	46	J-231	J-327	16	Ductile Iron	130	0	-49	0.08
P-255	18	J-327	J-189	16	Ductile Iron	130	0	-49	0.08
P-256	3	J-518	J-513	16	Ductile Iron	130	0	52	0.08
P-257	228	J-513	J-291	16	Ductile Iron	130	0	52	0.08
P-259	121	J-197	J-282	12	Ductile Iron	130	0	12	0.03
P-261	19	J-375	J-226	8	Ductile Iron	130	0	2	0.01
P-262	34	J-227	J-86	8	Ductile Iron	130	0	2	0.01
P-266	22	J-478	J-295	12	Ductile Iron	130	0	24	0.07
P-267	6	J-295	J-297	12	Ductile Iron	130	0	22	0.06
P-268	60	J-201	J-191	8	Ductile Iron	130	0	0	0
P-269	237	J-191	J-139	8	Ductile Iron	130	0	0	0

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-277	58	J-244	J-224	8	Ductile Iron	130	0	2	0.01
P-278	29	J-225	J-367	8	Ductile Iron	130	0	2	0.01
P-279	23	J-367	J-262	8	Ductile Iron	130	0	0	0
P-280	340	J-86	J-33	8	Ductile Iron	130	0	2	0.01
P-281	110	J-33	J-244	8	Ductile Iron	130	0	2	0.01
P-283	156	J-209	J-132	12	Ductile Iron	130	0	4	0.01
P-284	140	J-367	J-202	12	Ductile Iron	130	0	4	0.01
P-285	45	J-202	J-209	12	Ductile Iron	130	0	4	0.01
P-286	201	J-297	J-459	12	Ductile Iron	130	0	19	0.05
P-288	16	J-459	J-413	12	Ductile Iron	130	0	19	0.05
P-289	4	J-413	J-411	12	Ductile Iron	130	0	16	0.05
P-290	95	J-233	J-457	16	Ductile Iron	130	0	39	0.06
P-291	195	J-457	J-261	16	Ductile Iron	130	0	39	0.06
P-292	38	J-421	J-456	16	Ductile Iron	130	0	-164	0.26
P-293	69	J-456	J-519	16	Ductile Iron	130	0	-164	0.26
P-294	36	J-333	J-373	16	Ductile Iron	130	0	-200	0.32
P-295	875	J-373	J-365	16	Ductile Iron	130	0	-200	0.32
P-300	190	J-261	J-434	16	Ductile Iron	130	0	28	0.04
P-301	77	J-434	J-496	16	Ductile Iron	130	0	28	0.04
P-302	20	J-187	J-428	16	Ductile Iron	130	0	-22	0.03
P-303	40	J-428	J-446	16	Ductile Iron	130	0	-22	0.03
P-304	310	J-571	J-423	16	Ductile Iron	130	0	-76	0.12
P-309	214	J-270	J-373	12	Ductile Iron	130	0	0	0
P-310	32	J-423	J-387	16	Ductile Iron	130	0	-76	0.12
P-311	23	J-387	J-426	16	Ductile Iron	130	0	-76	0.12
P-312	184	J-151	J-125	8	Ductile Iron	130	0	2	0.01
P-314	65	J-157	J-171	12	Ductile Iron	130	0	2	0
P-315	137	J-171	J-372	12	Ductile Iron	130	0	0	0
P-316	16	J-153	J-143	12	Ductile Iron	130	0	2	0
P-317	32	J-143	J-156	12	Ductile Iron	130	0	2	0
P-318	100	J-353	J-101	12	Ductile Iron	130	0	-49	0.14
P-319	149	J-101	J-301	12	Ductile Iron	130	0	-49	0.14
P-330	274	J-272	J-181	12	Ductile Iron	130	0	12	0.03
P-332	80	J-181	J-51	12	Ductile Iron	130	0	12	0.03
P-333	67	J-51	J-197	12	Ductile Iron	130	0	12	0.03
P-334	33	J-464	J-154	30	Ductile Iron	130	0	96	0.04
P-336	10	J-154	J-152	30	Ductile Iron	130	0	96	0.04
P-337	708	J-152	J-395	30	Ductile Iron	130	0	96	0.04
P-338	154	J-363	J-73	12	Ductile Iron	130	0	-49	0.14
P-339	246	J-73	J-168	12	Ductile Iron	130	0	-49	0.14
P-340	89	J-156	J-137	12	Ductile Iron	130	0	2	0
P-341	185	J-137	J-367	12	Ductile Iron	130	0	2	0

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-342	51	J-365	J-71	12	Ductile Iron	130	0	-106	0.3
P-343	145	J-71	J-297	12	Ductile Iron	130	0	-106	0.3
P-348	5	J-223	J-106	12	Ductile Iron	130	0	-49	0.14
P-350	10	J-106	J-67	12	Ductile Iron	130	0	-49	0.14
P-351	263	J-67	J-69	12	Ductile Iron	130	0	-49	0.14
P-352	15	J-277	J-282	16	Ductile Iron	130	0	19	0.03
P-353	5	J-282	J-298	16	Ductile Iron	130	0	19	0.03
P-354	72	J-276	J-134	12	Ductile Iron	130	0	17	0.05
P-355	21	J-134	J-448	12	Ductile Iron	130	0	17	0.05
P-357	88	J-273	J-559	12	Ductile Iron	130	0	-5	0.01
P-358	583	J-364	J-271	12	Ductile Iron	130	0	-8	0.02
P-360	7	J-558	J-264	12	Ductile Iron	130	0	-16	0.05
P-362	73	J-563	J-242	16	Ductile Iron	130	0	-22	0.04
P-363	149	J-242	J-193	16	Ductile Iron	130	0	-22	0.04
P-364	173	J-607	J-259	16	Ductile Iron	130	0	-113	0.18
P-365	180	J-259	J-173	16	Ductile Iron	130	0	-113	0.18
P-366	82	J-580	J-256	16	Ductile Iron	130	0	-22	0.04
P-367	418	J-256	J-619	16	Ductile Iron	130	0	-22	0.04
P-368	4	J-24	J-7	16	Ductile Iron	130	0	-49	0.08
P-369	20	J-7	J-120	16	Ductile Iron	130	0	-49	0.08
P-370	49	J-355	J-77	12	Ductile Iron	130	0	-49	0.14
P-371	186	J-77	J-353	12	Ductile Iron	130	0	-49	0.14
P-372	155	J-375	J-43	12	Ductile Iron	130	0	2	0
P-373	119	J-43	J-157	12	Ductile Iron	130	0	2	0
P-374	56	J-325	J-63	12	Ductile Iron	130	0	-106	0.3
P-375	392	J-63	J-291	12	Ductile Iron	130	0	-106	0.3
P-376	22	J-402	J-200	8	Ductile Iron	130	0	18	0.11
P-377	1,316	J-200	J-516	8	Ductile Iron	130	0	18	0.11
P-378	69	J-372	J-47	12	Ductile Iron	130	0	0	0
P-379	87	J-47	J-270	12	Ductile Iron	130	0	0	0
P-380	207	J-487	J-183	12	Ductile Iron	130	0	-106	0.3
P-381	301	J-183	J-489	12	Ductile Iron	130	0	-113	0.32
P-382	731	J-213	J-180	8	Ductile Iron	130	0	-39	0.25
P-383	19	J-180	J-427	8	Ductile Iron	130	0	-46	0.3
P-384	19	J-315	J-150	12	Ductile Iron	130	0	12	0.03
P-385	164	J-150	J-469	12	Ductile Iron	130	0	12	0.03
P-386	200	J-121	J-5	16	Ductile Iron	130	0	-49	0.08
P-387	399	J-5	J-287	16	Ductile Iron	130	0	-49	0.08
P-388	6	J-278	J-148	12	Ductile Iron	130	0	0	0
P-389	11	J-148	J-279	12	Ductile Iron	130	0	0	0
P-390	52	J-131	J-91	12	Ductile Iron	130	0	0	0
P-391	77	J-91	J-273	12	Ductile Iron	130	0	0	0

Pipe Table

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-392	213	J-662	J-133	12	Ductile Iron	130	0	0	0
P-393	833	J-133	J-649	12	Ductile Iron	130	0	0	0
P-394	146	J-461	J-125	8	Ductile Iron	130	0	34	0.21
P-395	128	J-125	J-582	8	Ductile Iron	130	0	34	0.21
P-396	341	J-125	J-9	8	Ductile Iron	130	0	2	0.01
P-397	20	J-9	J-153	8	Ductile Iron	130	0	2	0.01
P-398	23	J-425	J-82	8	Ductile Iron	130	0	-17	0.11
P-399	26	J-82	J-386	8	Ductile Iron	130	0	-17	0.11
P-400	257	J-489	J-73	12	Ductile Iron	130	0	-113	0.32
P-401	74	J-73	J-531	12	Ductile Iron	130	0	-113	0.32
P-402	8	J-615	J-57	8	Ductile Iron	130	0	0	0
P-403	489	J-57	J-616	8	Ductile Iron	130	0	0	0
P-404	581	J-651	J-31	8	Ductile Iron	130	0	-26	0.16
P-405	643	J-31	J-520	8	Ductile Iron	130	0	-35	0.22
P-406	88	J-520	J-25	8	Ductile Iron	130	0	-42	0.27
P-407	24	J-25	J-401	8	Ductile Iron	130	0	-42	0.27
P-410	91	J-247	J-91	8	Ductile Iron	130	0	57	0.37
P-411	62	J-91	J-326	8	Ductile Iron	130	0	57	0.37
P-412	2	J-600	J-284	6	Ductile Iron	130	0	-9	0.1
P-414	2	J-284	J-600	6	Ductile Iron	130	0	9	0.1
P-415	372	J-600	J-441	6	Ductile Iron	130	0	16	0.18
P-416	822	J-614	J-284	6	Ductile Iron	130	0	20	0.23
P-417	2	J-284	J-652	6	Ductile Iron	130	0	0	0
P-418	47	J-263	J-24	16	Ductile Iron	130	0	0	0
P-419	5	J-24	J-254	16	Ductile Iron	130	0	49	0.08
P-435	17	J-400	J-534	8	Ductile Iron	130	0	38	0.24
P-437	1	J-534	J-639	6	Ductile Iron	130	0	36	0.41
P-438	27	J-639	J-401	8	Ductile Iron	130	0	42	0.27
P-441	17	J-426	J-640	8	Ductile Iron	130	0	43	0.27
P-443	1	J-640	J-641	6	Ductile Iron	130	0	37	0.42
P-444	32	J-641	J-427	8	Ductile Iron	130	0	46	0.3
P-445	14	J-421	J-642	8	Ductile Iron	130	0	45	0.29
P-447	1	J-642	J-592	6	Ductile Iron	130	0	36	0.41
P-448	34	J-592	J-422	8	Ductile Iron	130	0	47	0.3
P-449	17	J-385	J-673	8	Ductile Iron	130	0	16	0.1
P-451	1	J-673	J-624	6	Ductile Iron	130	0	15	0.17
P-452	24	J-624	J-386	8	Ductile Iron	130	0	17	0.11
P-453	24	J-321	J-69	12	Ductile Iron	130	0	24	0.07
P-454	5	J-69	J-322	12	Ductile Iron	130	0	24	0.07
P-457	90	J-581	J-4	16	Ductile Iron	130	0	100	0.16
P-459	269	J-465	J-383	12	Ductile Iron	130	0	-112	0.32
P-460	341	J-383	J-348	12	Ductile Iron	130	0	87	0.25

WATERLINE TANKSERLEY REPLACEMENT
Future Peak Hour Demands
Pipe Table



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-462	69	J-271	J-404	12	Ductile Iron	130	0	-15	0.04
P-463	312	J-404	J-664	12	Ductile Iron	130	0	-46	0.13
P-464	82	J-4	J-405	16	Ductile Iron	130	0	89	0.14
P-465	98	J-405	J-435	16	Ductile Iron	130	0	44	0.07
P-470	1,291	J-544	J-406	8	Ductile Iron	130	0	24	0.15
P-474	641	J-403	J-407	8	Ductile Iron	130	0	13	0.08
P-475	22	J-20	J-408	16	Ductile Iron	130	0	-55	0.09
P-476	601	J-408	J-635	16	Ductile Iron	130	0	-72	0.11
P-477	348	J-214	J-408	8	Ductile Iron	130	0	-17	0.11
P-479	776	J-409	J-405	8	Ductile Iron	130	0	-45	0.28
P-480	601	J-409	J-410	8	Ductile Iron	130	0	10	0.06
P-481	378	J-648	J-411	8	Ductile Iron	130	0	5	0.03
P-482	328	J-411	J-88	8	Ductile Iron	130	0	5	0.03
P-483	52	J-136	J-412	8	Ductile Iron	130	0	48	0.31
P-484	372	J-412	J-565	8	Ductile Iron	130	0	48	0.31
P-485	426	J-412	J-413	8	Ductile Iron	130	0	0	0
P-486	458	J-625	J-609	8	Ductile Iron	130	0	24	0.15
P-487	20	J-264	J-414	12	Ductile Iron	130	0	-21	0.06
P-488	218	J-414	J-234	12	Ductile Iron	130	0	-25	0.07
P-489	685	J-414	J-415	8	Ductile Iron	130	0	4	0.03
P-490	245	J-605	J-416	8	Ductile Iron	130	0	-14	0.09
P-493	344	J-418	J-419	8	Ductile Iron	130	0	-14	0.09
P-494	363	J-419	J-88	8	Ductile Iron	130	0	-14	0.09
P-495	506	J-416	J-418	8	Ductile Iron	130	0	-14	0.09
P-496	136	J-664	J-421	12	Ductile Iron	130	0	-51	0.14
P-497	191	J-421	J-348	12	Ductile Iron	130	0	-54	0.15
P-498	618	J-404	J-422	8	Ductile Iron	130	0	31	0.2
P-499	666	J-422	J-407	8	Ductile Iron	130	0	21	0.13
P-501	652	J-423	J-23	8	Ductile Iron	130	0	-35	0.22
P-502	482	J-406	J-424	8	Ductile Iron	130	0	-15	0.1
P-503	221	J-424	J-423	8	Ductile Iron	130	0	-23	0.15
P-505	266	J-425	J-406	8	Ductile Iron	130	0	-1	0.01
P-506	619	J-407	J-426	8	Ductile Iron	130	0	24	0.15
P-507	419	J-426	J-425	8	Ductile Iron	130	0	7	0.04
P-508	571	J-406	J-427	8	Ductile Iron	130	0	22	0.14
P-510	468	J-427	J-428	8	Ductile Iron	130	0	6	0.04
P-513	344	J-429	J-409	8	Ductile Iron	130	0	-35	0.22
P-514	221	J-428	J-430	8	Ductile Iron	130	0	-9	0.06
P-515	245	J-430	J-429	8	Ductile Iron	130	0	-20	0.13
P-520	606	J-348	J-431	8	Ductile Iron	130	0	32	0.21
P-521	675	J-431	J-403	8	Ductile Iron	130	0	22	0.14
P-524	189	J-415	J-433	8	Ductile Iron	130	0	4	0.03



Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-525	237	J-433	J-434	8	Ductile Iron	130	0	4	0.03
P-526	196	J-434	J-35	8	Ductile Iron	130	0	4	0.03



Label	Elevation (ft)	Flow (gpm)	Hydraulic Grade (ft)
R-1	1,300.00	202	1,300.00
R-2	1,287.10	654	1,287.10
R-3	1,285.38	0	1,285.38



APPENDIX C

Table 2.5 of the 2012 *Integrated Water Master Plan* by Carollo

Table 2.5 Estimated 2010 Developed Acreage By Pressure Zone
Town of Gilbert 2012 Integrated Water Resources Master Plan Update

Land Use Category	Density (DU/ac)	Pressure Zone 1 (ac)	Pressure Zone 2 (ac)	Pressure Zone 3 (ac)	Pressure Zone 4 (ac)	Total (ac)⁽¹⁾
Rural Residential	0 – 1	2,237	2,849	823	39	5,947
Low Density Residential 1	1 – 2	910	599	50	105	1,664
Low Density Residential 2	2 – 3.5	1,071	1,571	1,413	0	4,055
Medium Density Residential 1	3.5 – 5	5,778	3,181	1,810	469	11,238
Medium Density Residential 2	5 – 8	717	1,011	0	133	1,862
High Density Residential 1	8 – 14	197	95	0	54	346
High Density Residential 2	14 – 25	279	136	53	29	497
High Density Residential 3	25 – 50	4	0	0	0	4
Commercial	-	1,239	475	152	17	1,883
Regional Commercial	-	206	509	0	19	734
Industrial	-	1,086	23	0	10	1,119
Public (Schools)	-	746	719	385	91	1,941
No Water Service	-	558	662	271	33	1,523
Open Space	-	668	296	1,102	58	2,124
Total		15,696	12,126	6,059	1,057	34,938
Estimated Total Build-out Acreage	-	17,025	19,148	8,461	2,016	46,650
Estimated 2010 Percent Developed	-	92%	63%	72%	52%	75%

Note:

- (1) Acreage does not include the northeast corner of the Town's planning area (north of the RWCD canal, east of Recker Road) which receives water service from the City of Mesa



APPENDIX D

Water Demand Calculations

WATERLINE TANKSERLEY REPLACEMENT
Existing Demands Summary



Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
Tankersley North												
1	30447013W	1.06	Rural Residential	550	585.72	0.41	1.55	907.87	0.63	1.90	1,724.94	1.20
2	30447395A	0.97	Rural Residential	550	531.22	0.37	1.55	823.40	0.57	1.90	1,564.46	1.09
3	30447013X	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
4	30447397A	0.98	Rural Residential	550	541.04	0.38	1.55	838.60	0.58	1.90	1,593.35	1.11
5	30447013Y	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
6	30447396A	1.01	Rural Residential	550	555.58	0.39	1.55	861.15	0.60	1.90	1,636.19	1.14
7	30447013Z	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
8	30447399A	1.05	Rural Residential	550	579.20	0.40	1.55	897.77	0.62	1.90	1,705.76	1.18
9	30447392A	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
10	30447398	1.06	Rural Residential	550	583.84	0.41	1.55	904.95	0.63	1.90	1,719.40	1.19
11	30480983	1.33	Rural Residential	550	731.06	0.51	1.55	1,133.14	0.79	1.90	2,152.97	1.50
12	30447013L	1.66	Rural Residential	550	915.47	0.64	1.55	1,418.97	0.99	1.90	2,696.05	1.87
13	30447390	1.10	Rural Residential	550	605.64	0.42	1.55	938.75	0.65	1.90	1,783.62	1.24
14	30447799	1.24	Rural Residential	550	682.75	0.47	1.55	1,058.27	0.73	1.90	2,010.71	1.40
15	30447014Y	2.35	Rural Residential	550	1,291.22	0.90	1.55	2,001.40	1.39	1.90	3,802.66	2.64
16	30447089C	1.24	Rural Residential	550	679.52	0.47	1.55	1,053.26	0.73	1.90	2,001.19	1.39
17	30447800	1.26	Rural Residential	550	690.92	0.48	1.55	1,070.93	0.74	1.90	2,034.76	1.41
18	30447088A	1.27	Rural Residential	550	697.15	0.48	1.55	1,080.58	0.75	1.90	2,053.10	1.43
19	30447082A	1.38	Rural Residential	550	758.64	0.53	1.55	1,175.89	0.82	1.90	2,234.18	1.55
20	30447793	1.14	Rural Residential	550	629.38	0.44	1.55	975.54	0.68	1.90	1,853.53	1.29
21	30447014X	2.38	Rural Residential	550	1,307.93	0.91	1.55	2,027.29	1.41	1.90	3,851.85	2.67
22	30447014E	4.45	Rural Residential	550	2,446.45	1.70	1.55	3,792.00	2.63	1.90	7,204.80	5.00
23	30447014U	1.17	Rural Residential	550	642.68	0.45	1.55	996.15	0.69	1.90	1,892.68	1.31
24	30447056	1.17	Rural Residential	550	643.57	0.45	1.55	997.54	0.69	1.90	1,895.32	1.32
25	30447013K	1.68	Rural Residential	550	925.81	0.64	1.55	1,435.00	1.00	1.90	2,726.50	1.89
26	30447013J	1.64	Rural Residential	550	901.74	0.63	1.55	1,397.70	0.97	1.90	2,655.63	1.84
27	30447013M	1.62	Rural Residential	550	891.92	0.62	1.55	1,382.47	0.96	1.90	2,626.70	1.82
28	30447803	2.04	Rural Residential	550	1,123.37	0.78	1.55	1,741.23	1.21	1.90	3,308.33	2.30
29	30447963A	4.09	Rural Residential	550	2,251.17	1.56	1.55	3,489.32	2.42	1.90	6,629.71	4.60
30	30447391	1.28	Rural Residential	550	702.77	0.49	1.55	1,089.29	0.76	1.90	2,069.64	1.44
31	30447389A	1.41	Rural Residential	550	778.12	0.54	1.55	1,206.08	0.84	1.90	2,291.56	1.59
32	30447087	1.18	Rural Residential	550	647.23	0.45	1.55	1,003.21	0.70	1.90	1,906.11	1.32
33	30447798	1.06	Rural Residential	550	581.58	0.40	1.55	901.45	0.63	1.90	1,712.75	1.19
34	30447013E	4.50	Rural Residential	550	2,473.56	1.72	1.55	3,834.02	2.66	1.90	7,284.64	5.06
35	30447021L	1.19	Rural Residential	550	563.85	0.45	1.55	1,013.47	0.70	1.90	1,925.59	1.34
36	30447021V	1.34	Rural Residential	550	736.02	0.51	1.55	1,140.84	0.79	1.90	2,167.59	1.51
37	30447021U	1.10	Rural Residential	550	606.20	0.42	1.55	939.61	0.65	1.90	1,785.26	1.24
38	30447023X	1.31	Rural Residential	550	718.69	0.50	1.55	1,113.96	0.77	1.90	2,116.53	1.47
39	30447053	1.13	Rural Residential	550	622.25	0.43	1.55	964.48	0.67	1.90	1,832.52	1.27
40	30447023Y	1.20	Rural Residential	550	661.36	0.46	1.55	1,025.11	0.71	1.90	1,947.72	1.35
41	30447052L	1.13	Rural Residential	550	623.23	0.43	1.55	966.01	0.67	1.90	1,835.42	1.27
42	30447023Z	1.20	Rural Residential	550	661.45	0.46	1.55	1,025.25	0.71	1.90	1,947.98	1.35
43	30447052M	1.13	Rural Residential	550	622.65	0.43	1.55	965.11	0.67	1.90	1,833.71	1.27
44	30447050	1.24	Rural Residential	550	682.22	0.47	1.55	1,057.44	0.73	1.90	2,009.14	1.40
45	30447052F	1.02	Rural Residential	550	561.97	0.39	1.55	871.05	0.60	1.90	1,655.00	1.15
46	30447051	1.24	Rural Residential	550	682.32	0.47	1.55	1,057.60	0.73	1.90	2,009.44	1.40
47	30447797	1.09	Rural Residential	550	599.70	0.42	1.55	929.53	0.65	1.90	1,766.11	1.23
48	30447052H	1.03	Rural Residential	550	568.18	0.39	1.55	880.68	0.61	1.90	1,673.30	1.16
49	30447052J	1.03	Rural Residential	550	568.18	0.39	1.55	880.68	0.61	1.90	1,673.30	1.16
50	30447796A	2.17	Rural Residential	550	1,190.76	0.83	1.55	1,845.67	1.28	1.90	3,506.78	2.44
51	30447052N	1.16	Rural Residential	550	639.56	0.44	1.55	991.32	0.69	1.90	1,883.50	1.31
52	30447021Z	1.24	Rural Residential	550	680.93	0.47	1.55	1,055.45	0.73	1.90	2,005.35	1.39
53	30447021Y	1.89	Rural Residential	550	1,040.59	0.72	1.55	1,612.92	1.12	1.90	3,064.55	2.13
54	30447062C	1.49	Rural Residential	550	818.30	0.57	1.55	1,268.36	0.88	1.90	2,409.88	1.67
55	30447023Q	1.65	Rural Residential	550	909.84	0.63	1.55	1,410.25	0.98	1.90	2,679.47	1.86

WATERLINE TANKSERLEY REPLACEMENT
Existing Demands Summary

Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
56	30447023F	1.97	Rural Residential	550	1,084.36	0.75	1.55	1,680.75	1.17	1.90	3,193.43	2.22
57	30447023S	0.18	Rural Residential	550	97.03	0.07	1.55	150.40	0.10	1.90	285.76	0.20
58	30447965	1.36	Rural Residential	550	745.93	0.52	1.55	1,156.20	0.80	1.90	2,196.78	1.53
59	30447023L	1.50	Rural Residential	550	824.24	0.57	1.55	1,277.58	0.89	1.90	2,427.39	1.69
60	30447023N	1.00	Rural Residential	550	551.78	0.38	1.55	855.26	0.59	1.90	1,624.99	1.13
61	30447023R	1.48	Rural Residential	550	813.02	0.56	1.55	1,260.18	0.88	1.90	2,394.34	1.66
62	30447049	1.05	Rural Residential	550	575.38	0.40	1.55	891.84	0.62	1.90	1,694.49	1.18
63	30447079	1.09	Rural Residential	550	600.85	0.42	1.55	931.31	0.65	1.90	1,769.49	1.23
64	30447047	1.13	Rural Residential	550	620.21	0.43	1.55	961.33	0.67	1.90	1,826.53	1.27
65	30447048A	1.14	Rural Residential	550	626.69	0.44	1.55	971.37	0.67	1.90	1,845.61	1.28
66	30447077	1.12	Rural Residential	550	617.87	0.43	1.55	957.69	0.67	1.90	1,819.62	1.26
67	30447386A	2.35	Rural Residential	550	1,290.96	0.90	1.55	2,000.99	1.39	1.90	3,801.88	2.64
68	30447060	1.05	Rural Residential	550	575.33	0.40	1.55	891.76	0.62	1.90	1,694.34	1.18
69	30447394	1.00	Rural Residential	550	552.10	0.38	1.55	855.75	0.59	1.90	1,625.92	1.13
70	30447385C	1.29	Rural Residential	550	707.60	0.49	1.55	1,096.78	0.76	1.90	2,083.88	1.45
71	30447070E	2.49	Rural Residential	550	1,368.56	0.95	1.55	2,121.27	1.47	1.90	4,030.41	2.80
72	30447080	1.21	Rural Residential	550	666.68	0.46	1.55	1,033.35	0.72	1.90	1,963.37	1.36
73	30447069	1.19	Rural Residential	550	656.83	0.46	1.55	1,018.09	0.71	1.90	1,934.37	1.34
74	30447393	1.37	Rural Residential	550	755.09	0.52	1.55	1,170.39	0.81	1.90	2,223.74	1.54
75	30447081	1.17	Rural Residential	550	641.07	0.45	1.55	993.66	0.69	1.90	1,887.96	1.31
76	30447091	1.16	Rural Residential	550	637.50	0.44	1.55	988.13	0.69	1.90	1,877.44	1.30
77	30447090	1.20	Rural Residential	550	661.46	0.46	1.55	1,025.27	0.71	1.90	1,948.01	1.35
78	30447032H	1.14	Rural Residential	550	624.79	0.43	1.55	968.42	0.67	1.90	1,839.99	1.28
79	30447057	1.21	Rural Residential	550	666.97	0.46	1.55	1,033.80	0.72	1.90	1,964.23	1.36
80	30447083	1.14	Rural Residential	550	627.13	0.44	1.55	972.06	0.68	1.90	1,846.91	1.28
81	30447032N	1.25	Rural Residential	550	686.54	0.48	1.55	1,064.14	0.74	1.90	2,021.86	1.40
82	30447058	1.14	Rural Residential	550	627.66	0.44	1.55	972.88	0.68	1.90	1,848.47	1.28
83	30447084	1.02	Rural Residential	550	560.77	0.39	1.55	869.19	0.60	1.90	1,651.47	1.15
84	30447086	1.16	Rural Residential	550	635.38	0.44	1.55	984.84	0.68	1.90	1,871.19	1.30
85	30447039G	1.15	Rural Residential	550	633.85	0.44	1.55	982.47	0.68	1.90	1,866.69	1.30
86	30447061	1.34	Rural Residential	550	737.95	0.51	1.55	1,143.83	0.79	1.90	2,173.28	1.51
87	30480988	1.14	Rural Residential	550	629.08	0.44	1.55	975.07	0.68	1.90	1,852.64	1.29
88	30447014Z	2.13	Rural Residential	550	1,171.68	0.81	1.55	1,816.10	1.26	1.90	3,450.60	2.40
89	30447039F	1.15	Rural Residential	550	634.47	0.44	1.55	983.43	0.68	1.90	1,868.51	1.30
90	30447085	1.05	Rural Residential	550	578.48	0.40	1.55	896.65	0.62	1.90	1,703.64	1.18
91	30447802	4.79	Rural Residential	550	2,633.23	1.83	1.55	4,081.51	2.83	1.90	7,754.87	5.39
92	30447025C	1.25	Rural Residential	550	687.27	0.48	1.55	1,065.27	0.74	1.90	2,024.02	1.41
93	30447032J	2.49	Rural Residential	550	1,368.06	0.95	1.55	2,120.49	1.47	1.90	4,028.92	2.80
94	30447065B	1.20	Rural Residential	550	662.64	0.46	1.55	1,027.09	0.71	1.90	1,951.47	1.36
95	30447030D	1.18	Rural Residential	550	649.19	0.45	1.55	1,006.25	0.70	1.90	1,911.87	1.33
96	30447064A	1.15	Rural Residential	550	629.81	0.44	1.55	976.21	0.68	1.90	1,854.79	1.29
97	30447065C	1.19	Rural Residential	550	654.73	0.45	1.55	1,014.84	0.70	1.90	1,928.19	1.34
98	30447026C	1.19	Rural Residential	550	654.73	0.45	1.55	1,014.84	0.70	1.90	1,928.19	1.34
99	30447027C	1.32	Rural Residential	550	727.92	0.51	1.55	1,128.27	0.78	1.90	2,143.71	1.49
100	30447030F	1.32	Rural Residential	550	725.44	0.50	1.55	1,124.43	0.78	1.90	2,136.43	1.48
101	30447026B	1.21	Rural Residential	550	662.95	0.46	1.55	1,027.58	0.71	1.90	1,952.40	1.36
102	30447030E	2.49	Rural Residential	550	1,370.86	0.95	1.55	2,124.83	1.48	1.90	4,037.18	2.80
103	30447027B	1.07	Rural Residential	550	590.09	0.41	1.55	914.64	0.64	1.90	1,737.81	1.21
104	30447031D	2.47	Rural Residential	550	1,357.83	0.94	1.55	2,104.63	1.46	1.90	3,998.80	2.78
105	30447068A	2.38	Rural Residential	550	1,309.57	0.91	1.55	2,029.83	1.41	1.90	3,856.69	2.68
106	30447031C	2.50	Rural Residential	550	1,376.88	0.96	1.55	2,134.17	1.48	1.90	4,054.92	2.82
107	30447067A	2.41	Rural Residential	550	1,324.99	0.92	1.55	2,053.73	1.43	1.90	3,902.09	2.71
108	30447028D	1.21	Rural Residential	550	664.20	0.46	1.55	1,029.52	0.71	1.90	1,956.08	1.36
109	30447028E	2.44	Rural Residential	550	1,339.42	0.93	1.55	2,076.10	1.44	1.90	3,944.59	2.74
110	30447071B	2.25	Rural Residential	550	1,239.63	0.86	1.55	1,921.43	1.33	1.90	3,650.72	2.54
111	30447072G	1.34	Rural Residential	550	736.46	0.51	1.55	1,141.52	0.79	1.90	2,168.89	1.51
112	30447029F	2.49	Rural Residential	550	1,371.40	0.95	1.55	2,125.67	1.48	1.90	4,038.78	2.80
113	30447072D	1.19	Rural Residential	550	653.99	0.45	1.55	1,013.68	0.70	1.90	1,926.00	1.34

WATERLINE TANKSERLEY REPLACEMENT
Existing Demands Summary

Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
114	30447028F	1.29	Rural Residential	550	709.37	0.49	1.55	1,099.52	0.76	1.90	2,089.09	1.45
115	30447073	1.01	Rural Residential	550	554.97	0.39	1.55	860.21	0.60	1.90	1,634.40	1.14
116	30447029C	1.01	Rural Residential	550	555.08	0.39	1.55	860.37	0.60	1.90	1,634.70	1.14
117	30447074	1.02	Rural Residential	550	558.57	0.39	1.55	865.79	0.60	1.90	1,645.00	1.14
118	30447092B	1.10	Rural Residential	550	606.22	0.42	1.55	939.65	0.65	1.90	1,785.33	1.24
119	30447033C	3.09	Rural Residential	550	1,698.42	1.18	1.55	2,632.55	1.83	1.90	5,001.85	3.47
120	30447018T	2.37	Rural Residential	550	1,305.34	0.91	1.55	2,023.28	1.41	1.90	3,844.23	2.67
121	30447094A	1.26	Rural Residential	550	694.32	0.48	1.55	1,076.19	0.75	1.90	2,044.77	1.42
122	30447096	1.11	Rural Residential	550	607.85	0.42	1.55	942.17	0.65	1.90	1,790.13	1.24
123	30447093C	1.26	Rural Residential	550	692.73	0.48	1.55	1,073.73	0.75	1.90	2,040.08	1.42
124	30447093B	1.10	Rural Residential	550	605.96	0.42	1.55	939.24	0.65	1.90	1,784.55	1.24
125	30447095A	1.26	Rural Residential	550	693.35	0.48	1.55	1,074.69	0.75	1.90	2,041.90	1.42
126	30447097	1.09	Rural Residential	550	601.57	0.42	1.55	932.43	0.65	1.90	1,771.61	1.23
127	30447033B	1.47	Rural Residential	550	808.95	0.56	1.55	1,253.88	0.87	1.90	2,382.36	1.65
128	30447034C	1.11	Rural Residential	550	613.03	0.43	1.55	950.20	0.66	1.90	1,805.37	1.25
129	30447033D	1.00	Rural Residential	550	547.98	0.38	1.55	849.37	0.59	1.90	1,613.80	1.12
130	30447034D	1.02	Rural Residential	550	563.66	0.39	1.55	873.68	0.61	1.90	1,659.98	1.15
131	30447043U	1.00	Rural Residential	550	551.26	0.38	1.55	854.46	0.59	1.90	1,623.47	1.13
132	30447045B	1.36	Rural Residential	550	748.67	0.52	1.55	1,160.45	0.81	1.90	2,204.85	1.53
133	30447046B	1.36	Rural Residential	550	748.45	0.52	1.55	1,160.09	0.81	1.90	2,204.18	1.53
134	30447043T	1.00	Rural Residential	550	550.98	0.38	1.55	854.03	0.59	1.90	1,622.65	1.13
135	30447045C	1.00	Rural Residential	550	547.30	0.38	1.55	848.31	0.59	1.90	1,611.79	1.12
136	30447044A	2.33	Rural Residential	550	1,278.96	0.89	1.55	1,982.40	1.38	1.90	3,766.55	2.62
137	30486956	0.26	Rural Residential	550	145.68	0.10	1.55	225.81	0.16	1.90	429.03	0.30
138	30486952	1.01	Rural Residential	550	553.04	0.38	1.55	857.22	0.60	1.90	1,628.71	1.13
139	30486955	1.01	Rural Residential	550	553.47	0.38	1.55	857.88	0.60	1.90	1,629.98	1.13
140	30486951	1.01	Rural Residential	550	555.05	0.39	1.55	860.33	0.60	1.90	1,634.62	1.14
141	30486954	1.01	Rural Residential	550	555.64	0.39	1.55	861.25	0.60	1.90	1,636.37	1.14
142	30486950	1.01	Rural Residential	550	554.80	0.39	1.55	859.94	0.60	1.90	1,633.88	1.13
143	30486953	1.01	Rural Residential	550	555.64	0.39	1.55	861.25	0.60	1.90	1,636.37	1.14
144	30447054	1.43	Rural Residential	550	784.86	0.55	1.55	1,216.53	0.84	1.90	2,311.42	1.61
145	30447055	1.74	Rural Residential	550	958.52	0.67	1.55	1,485.71	1.03	1.90	2,822.85	1.96
146	30447082B	1.00	Rural Residential	550	550.77	0.38	1.55	853.69	0.59	1.90	1,622.02	1.13
147	30447794	1.15	Rural Residential	550	630.05	0.44	1.55	976.58	0.68	1.90	1,855.50	1.29
148	30447070B	1.27	Rural Residential	550	699.76	0.49	1.55	1,084.63	0.75	1.90	2,060.79	1.43
149	30447063	1.50	Rural Residential	550	825.00	0.57	1.55	1,278.75	0.89	1.90	2,429.63	1.69
150	30447385A	1.02	Rural Residential	550	563.37	0.39	1.55	873.23	0.61	1.90	1,659.13	1.15
151	30447385D	0.03	Rural Residential	550	15.49	0.01	1.55	24.01	0.02	1.90	45.63	0.03
152	30447386D	0.00	Rural Residential	550	1.55	0.00	1.55	2.41	0.00	1.90	4.57	0.00
153	30447032G	1.21	Rural Residential	550	664.39	0.46	1.55	1,029.81	0.72	1.90	1,956.64	1.36
154	30447032M	1.25	Rural Residential	550	685.63	0.48	1.55	1,062.73	0.74	1.90	2,019.18	1.40
155	30447032P	1.45	Rural Residential	550	795.13	0.55	1.55	1,232.45	0.86	1.90	2,341.65	1.63
156	30447059	1.75	Rural Residential	550	964.31	0.67	1.55	1,494.67	1.04	1.90	2,839.88	1.97
157	30447043S	2.43	Rural Residential	550	1,337.05	0.93	1.55	2,072.42	1.44	1.90	3,937.60	2.73
158	30447043R	2.40	Rural Residential	550	1,321.63	0.92	1.55	2,048.52	1.42	1.90	3,892.20	2.70
159	30447043Q	2.40	Rural Residential	550	1,320.76	0.92	1.55	2,047.17	1.42	1.90	3,889.63	2.70
160	30447043P	2.40	Rural Residential	550	1,319.90	0.92	1.55	2,045.84	1.42	1.90	3,887.10	2.70
161	30447035F	2.40	Rural Residential	550	1,319.03	0.92	1.55	2,044.49	1.42	1.90	3,884.54	2.70
162	30447035D	1.20	Rural Residential	550	661.91	0.46	1.55	1,025.96	0.71	1.90	1,949.31	1.35
163	30447035E	1.19	Rural Residential	550	656.25	0.46	1.55	1,017.19	0.71	1.90	1,932.66	1.34
164	30447036A	4.79	Rural Residential	550	2,633.71	1.83	1.55	4,082.25	2.83	1.90	7,756.28	5.39
165	30447037A	0.99	Rural Residential	550	546.70	0.38	1.55	847.39	0.59	1.90	1,610.04	1.12
166	30447037C	1.40	Rural Residential	550	768.85	0.53	1.55	1,191.72	0.83	1.90	2,264.27	1.57
167	30447038	2.37	Rural Residential	550	1,304.27	0.91	1.55	2,021.61	1.40	1.90	3,841.07	2.67
168	30447039B	1.25	Rural Residential	550	687.88	0.48	1.55	1,066.21	0.74	1.90	2,025.80	1.41
169	30447039A	1.22	Rural Residential	550	670.56	0.47	1.55	1,039.36	0.72	1.90	1,974.79	1.37
170	30495974	0.38	Low Density Residential 1	1,350	516.60	0.36	1.55	800.73	0.56	1.90	1,521.39	1.06
171	30495975	0.52		1,350	697.72	0.48	1.55	1,081.46	0.75	1.90	2,054.78	1.43

WATERLINE TANKSERLEY REPLACEMENT
Existing Demands Summary

Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
172	30495926	0.40	Low Density Residential 1	1,350	542.85	0.38	1.55	841.42	0.58	1.90	1,598.70	1.11
173	30495927	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
174	30495928	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
175	30495957	1.22	Low Density Residential 1	1,350	1,648.08	1.14	1.55	2,554.52	1.77	1.90	4,853.59	3.37
176	30495925	0.28	Low Density Residential 1	1,350	381.01	0.26	1.55	590.57	0.41	1.90	1,122.08	0.78
177	30495924	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
178	30495955	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
179	30495973	0.38	Low Density Residential 1	1,350	519.27	0.36	1.55	804.86	0.56	1.90	1,529.24	1.06
180	30495929	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
181	30495930	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
182	30495961	0.04	Low Density Residential 1	1,350	53.93	0.04	1.55	83.58	0.06	1.90	158.81	0.11
183	30495931	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
184	30495932	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
185	30495958	0.05	Low Density Residential 1	1,350	64.77	0.04	1.55	100.40	0.07	1.90	190.76	0.13
186	30495954	0.28	Low Density Residential 1	1,350	381.82	0.27	1.55	591.82	0.41	1.90	1,124.45	0.78
187	30495953	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
188	30495952	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
189	30495965	2.06	Low Density Residential 1	1,350	2,778.13	1.93	1.55	4,306.10	2.99	1.90	8,181.59	5.68
190	30495951	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
191	30495950	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
192	30495949	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
193	30495948	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
194	30495947	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
195	30495946	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
196	30495945	0.28	Low Density Residential 1	1,350	381.82	0.27	1.55	591.82	0.41	1.90	1,124.45	0.78
197	30495960	0.05	Low Density Residential 1	1,350	64.77	0.04	1.55	100.40	0.07	1.90	190.76	0.13
198	30495935	0.54	Low Density Residential 1	1,350	723.10	0.50	1.55	1,120.80	0.78	1.90	2,129.53	1.48
199	30495936	0.41	Low Density Residential 1	1,350	552.80	0.38	1.55	856.84	0.60	1.90	1,627.99	1.13
200	30495933	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
201	30495934	0.38	Low Density Residential 1	1,350	516.66	0.36	1.55	800.83	0.56	1.90	1,521.57	1.06
202	30495944	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
203	30495937	0.41	Low Density Residential 1	1,350	550.79	0.38	1.55	853.72	0.59	1.90	1,622.06	1.13
204	30495938	0.41	Low Density Residential 1	1,350	550.72	0.38	1.55	853.62	0.59	1.90	1,621.88	1.13
205	30495939	0.38	Low Density Residential 1	1,350	510.56	0.35	1.55	791.36	0.55	1.90	1,503.59	1.04
206	30495940	0.28	Low Density Residential 1	1,350	381.79	0.27	1.55	591.77	0.41	1.90	1,124.36	0.78
207	30495941	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
208	30495942	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
209	30495943	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
210	30495959	1.75	Low Density Residential 1	1,350	2,365.57	1.64	1.55	3,666.63	2.55	1.90	6,966.60	4.84
211	30495921	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
212	30495922	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
213	30495923	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
214	30495964	0.28	Low Density Residential 1	1,350	384.17	0.27	1.55	595.47	0.41	1.90	1,131.39	0.79
215	30447042	0.15	Low Density Residential 1	1,350	207.64	0.14	1.55	321.85	0.22	1.90	611.51	0.42
216	30495963	0.14	Low Density Residential 1	1,350	184.56	0.13	1.55	286.06	0.20	1.90	543.52	0.38
217	30495962	0.40	Low Density Residential 1	1,350	536.06	0.37	1.55	830.90	0.58	1.90	1,578.71	1.10
218	30447024	0.06	Public (Schools)	920	52.80	0.04	1.55	81.84	0.06	1.90	155.50	0.11
219	30447018B	0.06	Public (Schools)	920	52.80	0.04	1.55	81.84	0.06	1.90	155.50	0.11
220	30447983	8.47	Public (Schools)	920	7,790.30	5.41	1.55	12,074.97	8.39	1.90	22,942.45	15.93
221	30447403	0.51	Commercial	1,010	511.33	0.36	1.55	792.56	0.55	1.90	1,505.87	1.05
222	30447406	0.12	Commercial	1,010	121.54	0.08	1.55	188.39	0.13	1.90	357.94	0.25
223	30447401	1.58	Commercial	1,010	1,591.28	1.11	1.55	2,466.49	1.71	1.90	4,686.33	3.25
224	30447404	0.10	Commercial	1,010	97.68	0.07	1.55	151.41	0.11	1.90	287.68	0.20
225	30447402	2.23	Commercial	1,010	2,250.82	1.56	1.55	3,488.77	2.42	1.90	6,628.67	4.60
226	30447405	0.44	Commercial	1,010	441.45	0.31	1.55	684.24	0.48	1.90	1,300.06	0.90

Sum = 173,927.75

120.78

269,588.01

187.21

512,217.22

355.71

WATERLINE TANKSERLEY REPLACEMENT
Existing Demands Summary



Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
Tankersley South												
1	30453065A	0.97	Rural Residential	550	531.38	0.37	1.55	823.63	0.57	1.90	1,564.90	1.09
2	30453064A	1.05	Rural Residential	550	577.22	0.40	1.55	894.69	0.62	1.90	1,699.92	1.18
3	30453063A	1.04	Rural Residential	550	573.21	0.40	1.55	888.47	0.62	1.90	1,688.09	1.17
4	30453066	1.11	Rural Residential	550	610.58	0.42	1.55	946.40	0.66	1.90	1,798.16	1.25
5	30453067	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
6	30453068	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
7	30453069	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
8	30453062A	1.04	Rural Residential	550	574.46	0.40	1.55	890.41	0.62	1.90	1,691.78	1.17
9	30453070	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
10	30453061A	1.05	Rural Residential	550	576.62	0.40	1.55	893.76	0.62	1.90	1,698.13	1.18
11	30453071	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
12	30453060A	1.06	Rural Residential	550	580.62	0.40	1.55	899.96	0.62	1.90	1,709.92	1.19
13	30453072	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
14	30453059	1.04	Rural Residential	550	574.43	0.40	1.55	890.37	0.62	1.90	1,691.70	1.17
15	30453073	1.01	Rural Residential	550	553.99	0.38	1.55	858.68	0.60	1.90	1,631.50	1.13
16	30453058	1.06	Rural Residential	550	582.35	0.40	1.55	902.64	0.63	1.90	1,715.02	1.19
17	30453074	1.00	Rural Residential	550	552.31	0.38	1.55	856.08	0.59	1.90	1,626.55	1.13
18	30453057	1.17	Rural Residential	550	641.01	0.45	1.55	993.57	0.69	1.90	1,887.77	1.31
19	30453016R	1.09	Rural Residential	550	598.51	0.42	1.55	927.69	0.64	1.90	1,762.61	1.22
20	30453016T	1.14	Rural Residential	550	625.05	0.43	1.55	968.83	0.67	1.90	1,840.77	1.28
21	30453016U	1.09	Rural Residential	550	596.83	0.41	1.55	925.09	0.64	1.90	1,757.67	1.22
22	30453555	1.12	Rural Residential	550	616.96	0.43	1.55	956.28	0.66	1.90	1,816.94	1.26
23	30453181A	1.05	Rural Residential	550	577.56	0.40	1.55	895.22	0.62	1.90	1,700.92	1.18
24	30453180	1.01	Rural Residential	550	556.82	0.39	1.55	863.07	0.60	1.90	1,639.83	1.14
25	30453181C	1.01	Rural Residential	550	557.12	0.39	1.55	863.54	0.60	1.90	1,640.72	1.14
26	30453084	1.11	Rural Residential	550	609.05	0.42	1.55	944.03	0.66	1.90	1,793.66	1.25
27	30453083	1.11	Rural Residential	550	607.79	0.42	1.55	942.08	0.65	1.90	1,789.94	1.24
28	30453085	1.01	Rural Residential	550	553.60	0.38	1.55	858.08	0.60	1.90	1,630.35	1.13
29	30453082	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
30	30453086	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
31	30453081	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
32	30453087	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
33	30453080	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
34	30453088	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
35	30453079	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
36	30453089	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
37	30453078	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
38	30453090	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
39	30453077	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
40	30453091	1.00	Rural Residential	550	550.73	0.38	1.55	853.64	0.59	1.90	1,621.91	1.13
41	30453076	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
42	30453092	1.01	Rural Residential	550	554.07	0.38	1.55	858.80	0.60	1.90	1,631.72	1.13
43	30453176D	1.76	Rural Residential	550	966.15	0.67	1.55	1,497.53	1.04	1.90	2,845.31	1.98
44	30453191	0.30	Rural Residential	550	164.73	0.11	1.55	255.34	0.18	1.90	485.14	0.34
45	30453195	1.09	Rural Residential	550	597.87	0.42	1.55	926.69	0.64	1.90	1,760.72	1.22
46	30453177	1.08	Rural Residential	550	594.57	0.41	1.55	921.58	0.64	1.90	1,751.01	1.22
47	30453194	1.08	Rural Residential	550	595.06	0.41	1.55	922.35	0.64	1.90	1,752.46	1.22
48	30453175	1.09	Rural Residential	550	597.95	0.42	1.55	926.83	0.64	1.90	1,760.98	1.22
49	30453193	1.09	Rural Residential	550	598.18	0.42	1.55	927.18	0.64	1.90	1,761.65	1.22
50	30453189	1.09	Rural Residential	550	597.70	0.42	1.55	926.44	0.64	1.90	1,760.23	1.22
51	30453192	1.09	Rural Residential	550	597.22	0.41	1.55	925.69	0.64	1.90	1,758.82	1.22
52	30453188	1.08	Rural Residential	550	591.81	0.41	1.55	917.30	0.64	1.90	1,742.87	1.21
53	30453185	1.09	Rural Residential	550	598.66	0.42	1.55	927.93	0.64	1.90	1,763.06	1.22
54	30453016Z	1.09	Rural Residential	550	599.82	0.42	1.55	929.73	0.65	1.90	1,766.48	1.23
55	30453182	1.08	Rural Residential	550	595.63	0.41	1.55	923.23	0.64	1.90	1,754.13	1.22

WATERLINE TANKSERLEY REPLACEMENT
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				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
56	30453016X	1.08	Rural Residential	550	595.20	0.41	1.55	922.56	0.64	1.90	1,752.87	1.22
57	30453186	1.09	Rural Residential	550	597.39	0.41	1.55	925.95	0.64	1.90	1,759.30	1.22
58	30453174	1.08	Rural Residential	550	596.06	0.41	1.55	923.89	0.64	1.90	1,755.40	1.22
59	30453184C	1.09	Rural Residential	550	597.44	0.41	1.55	926.03	0.64	1.90	1,759.45	1.22
60	30453184A	0.93	Rural Residential	550	513.85	0.36	1.55	796.47	0.55	1.90	1,513.29	1.05
61	30453029	1.10	Rural Residential	550	604.87	0.42	1.55	937.55	0.65	1.90	1,781.35	1.24
62	30453028	1.11	Rural Residential	550	609.49	0.42	1.55	944.72	0.66	1.90	1,794.96	1.25
63	30453030	1.01	Rural Residential	550	556.00	0.39	1.55	861.80	0.60	1.90	1,637.41	1.14
64	30453027	1.01	Rural Residential	550	555.48	0.39	1.55	860.99	0.60	1.90	1,635.89	1.14
65	30453031	1.00	Rural Residential	550	548.99	0.38	1.55	850.93	0.59	1.90	1,616.78	1.12
66	30453026	1.01	Rural Residential	550	555.53	0.39	1.55	861.07	0.60	1.90	1,636.04	1.14
67	30453032	1.01	Rural Residential	550	552.82	0.38	1.55	856.86	0.60	1.90	1,628.04	1.13
68	30453025	1.01	Rural Residential	550	555.19	0.39	1.55	860.54	0.60	1.90	1,635.03	1.14
69	30453033	1.00	Rural Residential	550	552.65	0.38	1.55	856.61	0.59	1.90	1,627.56	1.13
70	30453024	1.01	Rural Residential	550	554.84	0.39	1.55	860.00	0.60	1.90	1,633.99	1.13
71	30453034	1.01	Rural Residential	550	557.51	0.39	1.55	864.14	0.60	1.90	1,641.87	1.14
72	30453023	1.01	Rural Residential	550	554.49	0.39	1.55	859.47	0.60	1.90	1,632.99	1.13
73	30453022	1.01	Rural Residential	550	554.15	0.38	1.55	858.94	0.60	1.90	1,631.98	1.13
74	30453036	1.01	Rural Residential	550	557.27	0.39	1.55	863.77	0.60	1.90	1,641.17	1.14
75	30453021	1.00	Rural Residential	550	550.57	0.38	1.55	853.38	0.59	1.90	1,621.42	1.13
76	30453037	1.00	Rural Residential	550	551.29	0.38	1.55	854.50	0.59	1.90	1,623.54	1.13
77	30453020D	1.27	Rural Residential	550	697.30	0.48	1.55	1,080.81	0.75	1.90	2,053.54	1.43
78	30453187	1.51	Rural Residential	550	828.06	0.58	1.55	1,283.49	0.89	1.90	2,438.62	1.69
79	30453020E	1.09	Rural Residential	550	598.90	0.42	1.55	928.30	0.64	1.90	1,763.76	1.22
80	30453183L	1.09	Rural Residential	550	597.35	0.41	1.55	925.89	0.64	1.90	1,759.19	1.22
81	30453183J	1.12	Rural Residential	550	615.15	0.43	1.55	953.48	0.66	1.90	1,811.62	1.26
82	30453183M	1.09	Rural Residential	550	597.35	0.41	1.55	925.89	0.64	1.90	1,759.19	1.22
83	30453183H	1.12	Rural Residential	550	616.12	0.43	1.55	954.99	0.66	1.90	1,814.48	1.26
84	30453183K	1.13	Rural Residential	550	619.99	0.43	1.55	960.98	0.67	1.90	1,825.86	1.27
85	30453183C	1.06	Rural Residential	550	584.08	0.41	1.55	905.32	0.63	1.90	1,720.11	1.19
86	30453183F	2.03	Rural Residential	550	1,118.47	0.78	1.55	1,733.63	1.20	1.90	3,293.90	2.29
87	30453205D	1.15	Rural Residential	550	633.67	0.44	1.55	982.20	0.68	1.90	1,866.17	1.30
88	30453205B	1.14	Rural Residential	550	628.23	0.44	1.55	973.76	0.68	1.90	1,850.14	1.28
89	30453183E	1.01	Rural Residential	550	557.99	0.39	1.55	864.89	0.60	1.90	1,643.29	1.14
90	30453183D	1.41	Rural Residential	550	777.17	0.54	1.55	1,204.62	0.84	1.90	2,288.77	1.59
91	30453047B	0.69	Rural Residential	550	380.98	0.26	1.55	590.53	0.41	1.90	1,122.00	0.78
92	30453046	1.10	Rural Residential	550	606.60	0.42	1.55	940.24	0.65	1.90	1,786.45	1.24
93	30453048	1.00	Rural Residential	550	551.38	0.38	1.55	854.63	0.59	1.90	1,623.80	1.13
94	30453045	1.01	Rural Residential	550	556.94	0.39	1.55	863.26	0.60	1.90	1,640.20	1.14
95	30453049	0.99	Rural Residential	550	546.72	0.38	1.55	847.41	0.59	1.90	1,610.08	1.12
96	30453044	1.01	Rural Residential	550	553.35	0.38	1.55	857.69	0.60	1.90	1,629.60	1.13
97	30453050	0.99	Rural Residential	550	546.00	0.38	1.55	846.30	0.59	1.90	1,607.96	1.12
98	30453043	1.01	Rural Residential	550	555.20	0.39	1.55	860.56	0.60	1.90	1,635.07	1.14
99	30453051	1.00	Rural Residential	550	548.32	0.38	1.55	849.90	0.59	1.90	1,614.80	1.12
100	30453042	1.01	Rural Residential	550	555.04	0.39	1.55	860.31	0.60	1.90	1,634.59	1.14
101	30453052	1.00	Rural Residential	550	548.70	0.38	1.55	850.48	0.59	1.90	1,615.92	1.12
102	30453041	1.01	Rural Residential	550	557.41	0.39	1.55	863.99	0.60	1.90	1,641.58	1.14
103	30453053	1.00	Rural Residential	550	550.86	0.38	1.55	853.83	0.59	1.90	1,622.28	1.13
104	30453040	1.00	Rural Residential	550	552.35	0.38	1.55	856.14	0.59	1.90	1,626.67	1.13
105	30453054	0.99	Rural Residential	550	546.21	0.38	1.55	846.63	0.59	1.90	1,608.59	1.12
106	30453039	1.01	Rural Residential	550	557.15	0.39	1.55	863.58	0.60	1.90	1,640.80	1.14
107	30453055	1.00	Rural Residential	550	548.37	0.38	1.55	849.98	0.59	1.90	1,614.95	1.12
108	30453038	1.00	Rural Residential	550	551.92	0.38	1.55	855.47	0.59	1.90	1,625.40	1.13
109	30453113	1.00	Rural Residential	550	547.89	0.38	1.55	849.23	0.59	1.90	1,613.54	1.12
110	30453112	0.99	Rural Residential	550	544.62	0.38	1.55	844.16	0.59	1.90	1,603.91	1.11
111	30453114	1.00	Rural Residential	550	552.29	0.38	1.55	856.04	0.59	1.90	1,626.48	1.13
112	30453111	1.00	Rural Residential	550	551.19	0.38	1.55	854.34	0.59	1.90	1,623.25	1.13
113	30453115	1.00	Rural Residential	550	548.21	0.38	1.55	849.72	0.59	1.90	1,614.47	1.12

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114	30453110	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
115	30453116	0.99	Rural Residential	550	545.52	0.38	1.55	845.55	0.59	1.90	1,606.55	1.12
116	30453109	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
117	30453117	0.99	Rural Residential	550	546.34	0.38	1.55	846.82	0.59	1.90	1,608.97	1.12
118	30453108	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
119	30453118	1.00	Rural Residential	550	547.73	0.38	1.55	848.98	0.59	1.90	1,613.06	1.12
120	30453107	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
121	30453119	1.00	Rural Residential	550	547.61	0.38	1.55	848.80	0.59	1.90	1,612.72	1.12
122	30453106	1.01	Rural Residential	550	554.28	0.38	1.55	859.13	0.60	1.90	1,632.36	1.13
123	30453120	1.00	Rural Residential	550	547.37	0.38	1.55	848.43	0.59	1.90	1,612.02	1.12
124	30453105	0.99	Rural Residential	550	545.34	0.38	1.55	845.28	0.59	1.90	1,606.03	1.12
125	30453007X	0.16	Rural Residential	550	86.63	0.06	1.55	134.27	0.09	1.90	255.12	0.18
126	30453366	1.03	Rural Residential	550	567.50	0.39	1.55	879.63	0.61	1.90	1,671.29	1.16
127	30453367	1.04	Rural Residential	550	572.99	0.40	1.55	888.14	0.62	1.90	1,687.46	1.17
128	30453368	1.04	Rural Residential	550	569.42	0.40	1.55	882.60	0.61	1.90	1,676.94	1.16
129	30453210A	1.37	Rural Residential	550	754.10	0.52	1.55	1,168.86	0.81	1.90	2,220.83	1.54
130	30453369	1.06	Rural Residential	550	580.82	0.40	1.55	900.27	0.63	1.90	1,710.52	1.19
131	30453240	0.36	Rural Residential	550	199.47	0.14	1.55	309.18	0.21	1.90	587.44	0.41
132	30453143	1.09	Rural Residential	550	601.00	0.42	1.55	931.55	0.65	1.90	1,769.94	1.23
133	30453145	1.04	Rural Residential	550	570.15	0.40	1.55	883.73	0.61	1.90	1,679.10	1.17
134	30453147	0.20	Rural Residential	550	112.08	0.08	1.55	173.73	0.12	1.90	330.09	0.23
135	30453144	1.10	Rural Residential	550	602.98	0.42	1.55	934.62	0.65	1.90	1,775.78	1.23
136	30453146	1.06	Rural Residential	550	581.01	0.40	1.55	900.57	0.63	1.90	1,711.07	1.19
137	30453142A	1.09	Rural Residential	550	599.94	0.42	1.55	929.90	0.65	1.90	1,766.81	1.23
138	30453142B	1.04	Rural Residential	550	569.70	0.40	1.55	883.03	0.61	1.90	1,677.76	1.17
139	30453139A	1.07	Rural Residential	550	586.12	0.41	1.55	908.49	0.63	1.90	1,726.13	1.20
140	30453141	1.14	Rural Residential	550	626.82	0.44	1.55	971.57	0.67	1.90	1,845.98	1.28
141	30453056	0.62	Rural Residential	550	340.51	0.24	1.55	527.78	0.37	1.90	1,002.79	0.70
142	30453153	1.17	Rural Residential	550	646.21	0.45	1.55	1,001.63	0.70	1.90	1,903.09	1.32
143	30453154	1.17	Rural Residential	550	643.89	0.45	1.55	998.03	0.69	1.90	1,896.25	1.32
144	30453152	1.00	Rural Residential	550	552.36	0.38	1.55	856.16	0.59	1.90	1,626.70	1.13
145	30453155	1.00	Rural Residential	550	552.31	0.38	1.55	856.08	0.59	1.90	1,626.55	1.13
146	30453156	1.00	Rural Residential	550	549.66	0.38	1.55	851.97	0.59	1.90	1,618.75	1.12
147	30453151	1.00	Rural Residential	550	550.40	0.38	1.55	853.13	0.59	1.90	1,620.94	1.13
148	30453159	0.81	Rural Residential	550	448.06	0.31	1.55	694.49	0.48	1.90	1,319.52	0.92
149	30453150	1.01	Rural Residential	550	554.19	0.38	1.55	859.00	0.60	1.90	1,632.10	1.13
150	30453157	1.01	Rural Residential	550	555.64	0.39	1.55	861.25	0.60	1.90	1,636.37	1.14
151	30453149	1.00	Rural Residential	550	552.23	0.38	1.55	855.96	0.59	1.90	1,626.33	1.13
152	30453158	1.01	Rural Residential	550	552.89	0.38	1.55	856.98	0.60	1.90	1,628.27	1.13
153	30453148	1.04	Rural Residential	550	574.12	0.40	1.55	889.88	0.62	1.90	1,690.77	1.17
154	30453135	1.13	Rural Residential	550	619.13	0.43	1.55	959.65	0.67	1.90	1,823.33	1.27
155	30453166B	1.15	Rural Residential	550	633.27	0.44	1.55	981.57	0.68	1.90	1,864.98	1.30
156	30453165E	1.15	Rural Residential	550	632.59	0.44	1.55	980.51	0.68	1.90	1,862.97	1.29
157	30453101	2.50	Rural Residential	550	1,375.00	0.95	1.55	2,131.25	1.48	1.90	4,049.38	2.81
158	30453166A	1.04	Rural Residential	550	572.69	0.40	1.55	887.67	0.62	1.90	1,686.57	1.17
159	30453166D	1.04	Rural Residential	550	572.02	0.40	1.55	886.63	0.62	1.90	1,684.60	1.17
160	30453165F	1.04	Rural Residential	550	571.96	0.40	1.55	886.53	0.62	1.90	1,684.41	1.17
161	30453165G	1.06	Rural Residential	550	580.78	0.40	1.55	900.21	0.63	1.90	1,710.41	1.19
162	30453166F	1.10	Rural Residential	550	606.38	0.42	1.55	939.88	0.65	1.90	1,785.78	1.24
163	30453165H	1.06	Rural Residential	550	580.82	0.40	1.55	900.27	0.63	1.90	1,710.52	1.19
164	30453166E	1.10	Rural Residential	550	605.45	0.42	1.55	938.45	0.65	1.90	1,783.06	1.24
165	30453165A	1.04	Rural Residential	550	572.13	0.40	1.55	886.81	0.62	1.90	1,684.93	1.17
166	30453166C	1.00	Rural Residential	550	548.84	0.38	1.55	850.70	0.59	1.90	1,616.33	1.12
167	30453165C	1.09	Rural Residential	550	598.99	0.42	1.55	928.43	0.64	1.90	1,764.03	1.23
168	30453161B	2.29	Commercial	1,010	2,311.13	1.60	1.55	3,582.25	2.49	1.90	6,806.27	4.73
169	30453100	2.50	Commercial	1,010	2,525.00	1.75	1.55	3,913.75	2.72	1.90	7,436.13	5.16
170	30453215	1.21	Commercial	1,010	1,225.70	0.85	1.55	1,899.84	1.32	1.90	3,609.70	2.51
171	30453214	1.21	Rural Residential	550	666.73	0.46	1.55	1,033.43	0.72	1.90	1,963.52	1.36

WATERLINE TANKSERLEY REPLACEMENT
Existing Demands Summary



Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
172	30453104	2.42	Commercial	1,010	2,446.82	1.70	1.55	3,792.56	2.63	1.90	7,205.87	5.00
173	30453213	1.21	Rural Residential	550	667.77	0.46	1.55	1,035.04	0.72	1.90	1,966.57	1.37
174	30453212	1.20	Commercial	1,010	1,215.90	0.84	1.55	1,884.64	1.31	1.90	3,580.81	2.49
175	30453103	2.41	Commercial	1,010	2,436.36	1.69	1.55	3,776.36	2.62	1.90	7,175.08	4.98
176	30453015V	4.97	Commercial	1,010	5,018.05	3.48	1.55	7,777.98	5.40	1.90	14,778.15	10.26
177	30453173C	2.42	Commercial	1,010	2,448.60	1.70	1.55	3,795.33	2.64	1.90	7,211.13	5.01
178	30453216	2.72	Commercial	1,010	2,750.58	1.91	1.55	4,263.40	2.96	1.90	8,100.46	5.63
179	30453171A	2.43	Commercial	1,010	2,456.95	1.71	1.55	3,808.27	2.64	1.90	7,235.71	5.02
180	30453009Z	1.15	Rural Residential	550	631.16	0.44	1.55	978.30	0.68	1.90	1,858.77	1.29
181	30453197	1.08	Rural Residential	550	592.99	0.41	1.55	919.14	0.64	1.90	1,746.36	1.21
182	30453162	1.15	Rural Residential	550	631.35	0.44	1.55	978.59	0.68	1.90	1,859.33	1.29
183	30453198	1.08	Rural Residential	550	593.76	0.41	1.55	920.33	0.64	1.90	1,748.63	1.21
184	30453163	1.15	Rural Residential	550	631.33	0.44	1.55	978.55	0.68	1.90	1,859.25	1.29
185	30453199	1.08	Rural Residential	550	593.70	0.41	1.55	920.23	0.64	1.90	1,748.45	1.21
186	30453164	1.15	Rural Residential	550	631.44	0.44	1.55	978.73	0.68	1.90	1,859.59	1.29
187	30453200	1.08	Rural Residential	550	593.80	0.41	1.55	920.39	0.64	1.90	1,748.74	1.21
188	30453168	1.15	Rural Residential	550	630.00	0.44	1.55	976.50	0.68	1.90	1,855.35	1.29
189	30453009N	1.15	Rural Residential	550	634.66	0.44	1.55	983.72	0.68	1.90	1,869.07	1.30
190	30453167	1.15	Rural Residential	550	630.33	0.44	1.55	977.01	0.68	1.90	1,856.32	1.29
191	30453238	0.41	Rural Residential	550	225.95	0.16	1.55	350.22	0.24	1.90	665.41	0.46
192	30453121	0.55	Rural Residential	550	302.58	0.21	1.55	468.99	0.33	1.90	891.09	0.62
193	30453201	1.08	Rural Residential	550	593.74	0.41	1.55	920.29	0.64	1.90	1,748.56	1.21
194	30453140	1.03	Rural Residential	550	563.98	0.39	1.55	874.16	0.61	1.90	1,660.91	1.15
195	30453139E	1.03	Rural Residential	550	568.86	0.40	1.55	881.74	0.61	1.90	1,675.30	1.16
196	30453139D	1.03	Rural Residential	550	568.86	0.40	1.55	881.74	0.61	1.90	1,675.30	1.16
197	30453139C	0.99	Rural Residential	550	543.47	0.38	1.55	842.38	0.58	1.90	1,600.53	1.11
198	30453006F	1.64	Rural Residential	550	903.27	0.63	1.55	1,400.07	0.97	1.90	2,660.13	1.85
199	30453006G	1.83	Rural Residential	550	1,007.17	0.70	1.55	1,561.12	1.08	1.90	2,966.12	2.06
200	30453014F	1.29	Rural Residential	550	708.43	0.49	1.55	1,098.07	0.76	1.90	2,086.34	1.45
201	30453553	1.46	Commercial	1,010	1,472.22	1.02	1.55	2,281.94	1.58	1.90	4,335.69	3.01
202	30453160A	2.99	Commercial	1,010	3,016.81	2.10	1.55	4,676.05	3.25	1.90	8,884.50	6.17
203	30453371	2.82	Commercial	1,010	2,849.15	1.98	1.55	4,416.18	3.07	1.90	8,390.73	5.83
204	30453239	0.21	Commercial	1,010	209.93	0.15	1.55	325.39	0.23	1.90	618.24	0.43

Sum = 142,351.68 98.86

220,645.10 153.23

419,225.70 291.13

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
Tankersley North												
1	30447013W	1.06	Rural Residential	550	585.72	0.41	1.55	907.87	0.63	1.90	1,724.94	1.20
2	30447395A	0.97	Rural Residential	550	531.22	0.37	1.55	823.40	0.57	1.90	1,564.46	1.09
3	30447013X	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
4	30447397A	0.98	Rural Residential	550	541.04	0.38	1.55	838.60	0.58	1.90	1,593.35	1.11
5	30447013Y	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
6	30447396A	1.01	Rural Residential	550	555.58	0.39	1.55	861.15	0.60	1.90	1,636.19	1.14
7	30447013Z	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
8	30447400A	1.03	Rural Residential	550	568.86	0.40	1.55	881.74	0.61	1.90	1,675.30	1.16
9	30447392B	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
10	30447399A	1.05	Rural Residential	550	579.20	0.40	1.55	897.77	0.62	1.90	1,705.76	1.18
11	30447392A	1.06	Rural Residential	550	585.29	0.41	1.55	907.20	0.63	1.90	1,723.68	1.20
12	30447398	1.06	Rural Residential	550	583.84	0.41	1.55	904.95	0.63	1.90	1,719.40	1.19
13	30480982	1.10	Rural Residential	550	604.07	0.42	1.55	936.30	0.65	1.90	1,778.97	1.24
14	30480983	1.33	Rural Residential	550	731.06	0.51	1.55	1,133.14	0.79	1.90	2,152.97	1.50
15	30447013L	1.66	Rural Residential	550	915.47	0.64	1.55	1,418.97	0.99	1.90	2,696.05	1.87
16	30447391	1.28	Rural Residential	550	702.77	0.49	1.55	1,089.29	0.76	1.90	2,069.64	1.44
17	30447389A	1.41	Rural Residential	550	778.12	0.54	1.55	1,206.08	0.84	1.90	2,291.56	1.59
18	30447087	1.18	Rural Residential	550	647.23	0.45	1.55	1,003.21	0.70	1.90	1,906.11	1.32
19	30447089B	1.17	Rural Residential	550	644.89	0.45	1.55	999.57	0.69	1.90	1,899.19	1.32
20	30447798	1.06	Rural Residential	550	581.58	0.40	1.55	901.45	0.63	1.90	1,712.75	1.19
21	30447013E	4.50	Rural Residential	550	2,473.56	1.72	1.55	3,834.02	2.66	1.90	7,284.64	5.06
22	30447390	1.10	Rural Residential	550	605.64	0.42	1.55	938.75	0.65	1.90	1,783.62	1.24
23	30447799	1.24	Rural Residential	550	682.75	0.47	1.55	1,058.27	0.73	1.90	2,010.71	1.40
24	30447014Y	2.35	Rural Residential	550	1,291.22	0.90	1.55	2,001.40	1.39	1.90	3,802.66	2.64
25	30447089C	1.24	Rural Residential	550	679.52	0.47	1.55	1,053.26	0.73	1.90	2,001.19	1.39
26	30447800	1.26	Rural Residential	550	690.92	0.48	1.55	1,070.93	0.74	1.90	2,034.76	1.41
27	30447088A	1.27	Rural Residential	550	697.15	0.48	1.55	1,080.58	0.75	1.90	2,053.10	1.43
28	30447801	1.12	Rural Residential	550	615.54	0.43	1.55	954.09	0.66	1.90	1,812.77	1.26
29	30447082B	1.00	Rural Residential	550	550.77	0.38	1.55	853.69	0.59	1.90	1,622.02	1.13
30	30447794	1.15	Rural Residential	550	630.05	0.44	1.55	976.58	0.68	1.90	1,855.50	1.29
31	30447082A	1.38	Rural Residential	550	758.64	0.53	1.55	1,175.89	0.82	1.90	2,234.18	1.55
32	30447389B	1.00	Rural Residential	550	549.96	0.38	1.55	852.44	0.59	1.90	1,619.64	1.12
33	30447793	1.14	Rural Residential	550	629.38	0.44	1.55	975.54	0.68	1.90	1,853.53	1.29
34	30447014X	2.38	Rural Residential	550	1,307.93	0.91	1.55	2,027.29	1.41	1.90	3,851.85	2.67
35	30480987	1.23	Rural Residential	550	678.76	0.47	1.55	1,052.08	0.73	1.90	1,998.96	1.39
36	30447014E	4.45	Rural Residential	550	2,446.45	1.70	1.55	3,792.00	2.63	1.90	7,204.80	5.00
37	30447014U	1.17	Rural Residential	550	642.68	0.45	1.55	996.15	0.69	1.90	1,892.68	1.31
38	30447056	1.17	Rural Residential	550	643.57	0.45	1.55	997.54	0.69	1.90	1,895.32	1.32
39	30447013K	1.68	Rural Residential	550	925.81	0.64	1.55	1,435.00	1.00	1.90	2,726.50	1.89
40	30447013J	1.64	Rural Residential	550	901.74	0.63	1.55	1,397.70	0.97	1.90	2,655.63	1.84
41	30447013M	1.62	Rural Residential	550	891.92	0.62	1.55	1,382.47	0.96	1.90	2,626.70	1.82
42	30447013N	0.88	Rural Residential	550	483.76	0.34	1.55	749.83	0.52	1.90	1,424.68	0.99
43	30447803	2.04	Rural Residential	550	1,123.37	0.78	1.55	1,741.23	1.21	1.90	3,308.33	2.30
44	30447963A	4.09	Rural Residential	550	2,251.17	1.56	1.55	3,489.32	2.42	1.90	6,629.71	4.60
45	30447021L	1.19	Rural Residential	550	653.85	0.45	1.55	1,013.47	0.70	1.90	1,925.59	1.34
46	30447021V	1.34	Rural Residential	550	736.02	0.51	1.55	1,140.84	0.79	1.90	2,167.59	1.51
47	30447021U	1.10	Rural Residential	550	606.20	0.42	1.55	939.61	0.65	1.90	1,785.26	1.24
48	30447023X	1.31	Rural Residential	550	718.69	0.50	1.55	1,113.96	0.77	1.90	2,116.53	1.47
49	30447053	1.13	Rural Residential	550	622.25	0.43	1.55	964.48	0.67	1.90	1,832.52	1.27
50	30447023Y	1.20	Rural Residential	550	661.36	0.46	1.55	1,025.11	0.71	1.90	1,947.72	1.35
51	30447052L	1.13	Rural Residential	550	623.23	0.43	1.55	966.01	0.67	1.90	1,835.42	1.27
52	30447023Z	1.20	Rural Residential	550	661.45	0.46	1.55	1,025.25	0.71	1.90	1,947.98	1.35
53	30447052M	1.13	Rural Residential	550	622.65	0.43	1.55	965.11	0.67	1.90	1,833.71	1.27
54	30447050	1.24	Rural Residential	550	682.22	0.47	1.55	1,057.44	0.73	1.90	2,009.14	1.40
55	30447052F	1.02	Rural Residential	550	561.97	0.39	1.55	871.05	0.60	1.90	1,655.00	1.15

WATERLINE TANKSERLEY REPLACEMENT
Future Demands Summary



Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
56	30447051	1.24	Rural Residential	550	682.32	0.47	1.55	1,057.60	0.73	1.90	2,009.44	1.40
57	30447052G	1.03	Rural Residential	550	568.18	0.39	1.55	880.68	0.61	1.90	1,673.30	1.16
58	30447797	1.09	Rural Residential	550	599.70	0.42	1.55	929.53	0.65	1.90	1,766.11	1.23
59	30447052H	1.03	Rural Residential	550	568.18	0.39	1.55	880.68	0.61	1.90	1,673.30	1.16
60	30447052J	1.03	Rural Residential	550	568.18	0.39	1.55	880.68	0.61	1.90	1,673.30	1.16
61	30447796A	2.17	Rural Residential	550	1,190.76	0.83	1.55	1,845.67	1.28	1.90	3,506.78	2.44
62	30447052N	1.16	Rural Residential	550	639.56	0.44	1.55	991.32	0.69	1.90	1,883.50	1.31
63	30447021Z	1.24	Rural Residential	550	680.93	0.47	1.55	1,055.45	0.73	1.90	2,005.35	1.39
64	30447021Y	1.89	Rural Residential	550	1,040.59	0.72	1.55	1,612.92	1.12	1.90	3,064.55	2.13
65	30447062C	1.49	Rural Residential	550	818.30	0.57	1.55	1,268.36	0.88	1.90	2,409.88	1.67
66	30447023Q	1.65	Rural Residential	550	909.84	0.63	1.55	1,410.25	0.98	1.90	2,679.47	1.86
67	30447023F	1.97	Rural Residential	550	1,084.36	0.75	1.55	1,680.75	1.17	1.90	3,193.43	2.22
68	30447023S	0.18	Rural Residential	550	97.03	0.07	1.55	150.40	0.10	1.90	285.76	0.20
69	30447965	1.36	Rural Residential	550	745.93	0.52	1.55	1,156.20	0.80	1.90	2,196.78	1.53
70	30447023L	1.50	Rural Residential	550	824.24	0.57	1.55	1,277.58	0.89	1.90	2,427.39	1.69
71	30447048E	1.00	Rural Residential	550	550.04	0.38	1.55	852.56	0.59	1.90	1,619.86	1.12
72	30447048D	1.64	Rural Residential	550	902.39	0.63	1.55	1,398.70	0.97	1.90	2,657.53	1.85
73	30447023N	1.00	Rural Residential	550	551.78	0.38	1.55	855.26	0.59	1.90	1,624.99	1.13
74	30447023R	1.48	Rural Residential	550	813.02	0.56	1.55	1,260.18	0.88	1.90	2,394.34	1.66
75	30447049	1.05	Rural Residential	550	575.38	0.40	1.55	891.84	0.62	1.90	1,694.49	1.18
76	30447079	1.09	Rural Residential	550	600.85	0.42	1.55	931.31	0.65	1.90	1,769.49	1.23
77	30447047	1.13	Rural Residential	550	620.21	0.43	1.55	961.33	0.67	1.90	1,826.53	1.27
78	30447078	1.09	Rural Residential	550	600.77	0.42	1.55	931.19	0.65	1.90	1,769.27	1.23
79	30447048A	1.14	Rural Residential	550	626.69	0.44	1.55	971.37	0.67	1.90	1,845.61	1.28
80	30447077	1.12	Rural Residential	550	617.87	0.43	1.55	957.69	0.67	1.90	1,819.62	1.26
81	30447386A	2.35	Rural Residential	550	1,290.96	0.90	1.55	2,000.99	1.39	1.90	3,801.88	2.64
82	30447060	1.05	Rural Residential	550	575.33	0.40	1.55	891.76	0.62	1.90	1,694.34	1.18
83	30447394	1.00	Rural Residential	550	552.10	0.38	1.55	855.75	0.59	1.90	1,625.92	1.13
84	30447385C	1.29	Rural Residential	550	707.60	0.49	1.55	1,096.78	0.76	1.90	2,083.88	1.45
85	30447070E	2.49	Rural Residential	550	1,368.56	0.95	1.55	2,121.27	1.47	1.90	4,030.41	2.80
86	30447080	1.21	Rural Residential	550	666.68	0.46	1.55	1,033.35	0.72	1.90	1,963.37	1.36
87	30447069	1.19	Rural Residential	550	656.83	0.46	1.55	1,018.09	0.71	1.90	1,934.37	1.34
88	30447393	1.37	Rural Residential	550	755.09	0.52	1.55	1,170.39	0.81	1.90	2,223.74	1.54
89	30447081	1.17	Rural Residential	550	641.07	0.45	1.55	993.66	0.69	1.90	1,887.96	1.31
90	30447091	1.16	Rural Residential	550	637.50	0.44	1.55	988.13	0.69	1.90	1,877.44	1.30
91	30447090	1.20	Rural Residential	550	661.46	0.46	1.55	1,025.27	0.71	1.90	1,948.01	1.35
92	30447032H	1.14	Rural Residential	550	624.79	0.43	1.55	968.42	0.67	1.90	1,839.99	1.28
93	30447057	1.21	Rural Residential	550	666.97	0.46	1.55	1,033.80	0.72	1.90	1,964.23	1.36
94	30447083	1.14	Rural Residential	550	627.13	0.44	1.55	972.06	0.68	1.90	1,846.91	1.28
95	30447032N	1.25	Rural Residential	550	686.54	0.48	1.55	1,064.14	0.74	1.90	2,021.86	1.40
96	30447058	1.14	Rural Residential	550	627.66	0.44	1.55	972.88	0.68	1.90	1,848.47	1.28
97	30447084	1.02	Rural Residential	550	560.77	0.39	1.55	869.19	0.60	1.90	1,651.47	1.15
98	30447086	1.16	Rural Residential	550	635.38	0.44	1.55	984.84	0.68	1.90	1,871.19	1.30
99	30447039G	1.15	Rural Residential	550	633.85	0.44	1.55	982.47	0.68	1.90	1,866.69	1.30
100	30447061	1.34	Rural Residential	550	737.95	0.51	1.55	1,143.83	0.79	1.90	2,173.28	1.51
101	30480988	1.14	Rural Residential	550	629.08	0.44	1.55	975.07	0.68	1.90	1,852.64	1.29
102	30447014Z	2.13	Rural Residential	550	1,171.68	0.81	1.55	1,816.10	1.26	1.90	3,450.60	2.40
103	30447039F	1.15	Rural Residential	550	634.47	0.44	1.55	983.43	0.68	1.90	1,868.51	1.30
104	30447085	1.05	Rural Residential	550	578.48	0.40	1.55	896.65	0.62	1.90	1,703.64	1.18
105	30447802	4.79	Rural Residential	550	2,633.23	1.83	1.55	4,081.51	2.83	1.90	7,754.87	5.39
106	30447032Q	1.04	Rural Residential	550	574.10	0.40	1.55	889.86	0.62	1.90	1,690.73	1.17
107	30447025C	1.25	Rural Residential	550	687.27	0.48	1.55	1,065.27	0.74	1.90	2,024.02	1.41
108	30447032J	2.49	Rural Residential	550	1,368.06	0.95	1.55	2,120.49	1.47	1.90	4,028.92	2.80
109	30447065B	1.20	Rural Residential	550	662.64	0.46	1.55	1,027.09	0.71	1.90	1,951.47	1.36
110	30447030D	1.18	Rural Residential	550	649.19	0.45	1.55	1,006.25	0.70	1.90	1,911.87	1.33
111	30447064A	1.15	Rural Residential	550	629.81	0.44	1.55	976.21	0.68	1.90	1,854.79	1.29
112	30447065C	1.19	Rural Residential	550	654.73	0.45	1.55	1,014.84	0.70	1.90	1,928.19	1.34
113	30447026C	1.19	Rural Residential	550	654.73	0.45	1.55	1,014.84	0.70	1.90	1,928.19	1.34

WATERLINE TANKSERLEY REPLACEMENT
Future Demands Summary



Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
114	30447027C	1.32	Rural Residential	550	727.92	0.51	1.55	1,128.27	0.78	1.90	2,143.71	1.49
115	30447030F	1.32	Rural Residential	550	725.44	0.50	1.55	1,124.43	0.78	1.90	2,136.43	1.48
116	30447026B	1.21	Rural Residential	550	662.95	0.46	1.55	1,027.58	0.71	1.90	1,952.40	1.36
117	30447030E	2.49	Rural Residential	550	1,370.86	0.95	1.55	2,124.83	1.48	1.90	4,037.18	2.80
118	30447027B	1.07	Rural Residential	550	590.09	0.41	1.55	914.64	0.64	1.90	1,737.81	1.21
119	30447031D	2.47	Rural Residential	550	1,357.83	0.94	1.55	2,104.63	1.46	1.90	3,998.80	2.78
120	30447068A	2.38	Rural Residential	550	1,309.57	0.91	1.55	2,029.83	1.41	1.90	3,856.69	2.68
121	30447031C	2.50	Rural Residential	550	1,376.88	0.96	1.55	2,134.17	1.48	1.90	4,054.92	2.82
122	30447067A	2.41	Rural Residential	550	1,324.99	0.92	1.55	2,053.73	1.43	1.90	3,902.09	2.71
123	30447028D	1.21	Rural Residential	550	664.20	0.46	1.55	1,029.52	0.71	1.90	1,956.08	1.36
124	30447028E	2.44	Rural Residential	550	1,339.42	0.93	1.55	2,076.10	1.44	1.90	3,944.59	2.74
125	30447071B	2.25	Rural Residential	550	1,239.63	0.86	1.55	1,921.43	1.33	1.90	3,650.72	2.54
126	30447072G	1.34	Rural Residential	550	736.46	0.51	1.55	1,141.52	0.79	1.90	2,168.89	1.51
127	30447029F	2.49	Rural Residential	550	1,371.40	0.95	1.55	2,125.67	1.48	1.90	4,038.78	2.80
128	30447072D	1.19	Rural Residential	550	653.99	0.45	1.55	1,013.68	0.70	1.90	1,926.00	1.34
129	30447028F	1.29	Rural Residential	550	709.37	0.49	1.55	1,099.52	0.76	1.90	2,089.09	1.45
130	30447073	1.01	Rural Residential	550	554.97	0.39	1.55	860.21	0.60	1.90	1,634.40	1.14
131	30447029C	1.01	Rural Residential	550	555.08	0.39	1.55	860.37	0.60	1.90	1,634.70	1.14
132	30447074	1.02	Rural Residential	550	558.57	0.39	1.55	865.79	0.60	1.90	1,645.00	1.14
133	30447092B	1.10	Rural Residential	550	606.22	0.42	1.55	939.65	0.65	1.90	1,785.33	1.24
134	30447033C	3.09	Rural Residential	550	1,698.42	1.18	1.55	2,632.55	1.83	1.90	5,001.85	3.47
135	30447018T	2.37	Rural Residential	550	1,305.34	0.91	1.55	2,023.28	1.41	1.90	3,844.23	2.67
136	30447094A	1.26	Rural Residential	550	694.32	0.48	1.55	1,076.19	0.75	1.90	2,044.77	1.42
137	30447096	1.11	Rural Residential	550	607.85	0.42	1.55	942.17	0.65	1.90	1,790.13	1.24
138	30447092C	1.26	Rural Residential	550	694.92	0.48	1.55	1,077.13	0.75	1.90	2,046.55	1.42
139	30447029G	1.25	Rural Residential	550	687.58	0.48	1.55	1,065.74	0.74	1.90	2,024.91	1.41
140	30447029E	0.25	Rural Residential	550	135.67	0.09	1.55	210.29	0.15	1.90	399.55	0.28
141	30447093C	1.26	Rural Residential	550	692.73	0.48	1.55	1,073.73	0.75	1.90	2,040.08	1.42
142	30447093B	1.10	Rural Residential	550	605.96	0.42	1.55	939.24	0.65	1.90	1,784.55	1.24
143	30447095A	1.26	Rural Residential	550	693.35	0.48	1.55	1,074.69	0.75	1.90	2,041.90	1.42
144	30447097	1.09	Rural Residential	550	601.57	0.42	1.55	932.43	0.65	1.90	1,771.61	1.23
145	30447033B	1.47	Rural Residential	550	808.95	0.56	1.55	1,253.88	0.87	1.90	2,382.36	1.65
146	30447034C	1.11	Rural Residential	550	613.03	0.43	1.55	950.20	0.66	1.90	1,805.37	1.25
147	30447033D	1.00	Rural Residential	550	547.98	0.38	1.55	849.37	0.59	1.90	1,613.80	1.12
148	30447034D	1.02	Rural Residential	550	563.66	0.39	1.55	873.68	0.61	1.90	1,659.98	1.15
149	30447043U	1.00	Rural Residential	550	551.26	0.38	1.55	854.46	0.59	1.90	1,623.47	1.13
150	30447045B	1.36	Rural Residential	550	748.67	0.52	1.55	1,160.45	0.81	1.90	2,204.85	1.53
151	30447046B	1.36	Rural Residential	550	748.45	0.52	1.55	1,160.09	0.81	1.90	2,204.18	1.53
152	30447043T	1.00	Rural Residential	550	550.98	0.38	1.55	854.03	0.59	1.90	1,622.65	1.13
153	30447045C	1.00	Rural Residential	550	547.30	0.38	1.55	848.31	0.59	1.90	1,611.79	1.12
154	30447046A	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
155	30447044A	2.33	Rural Residential	550	1,278.96	0.89	1.55	1,982.40	1.38	1.90	3,766.55	2.62
156	30486956	0.26	Rural Residential	550	145.68	0.10	1.55	225.81	0.16	1.90	429.03	0.30
157	30486952	1.01	Rural Residential	550	553.04	0.38	1.55	857.22	0.60	1.90	1,628.71	1.13
158	30486955	1.01	Rural Residential	550	553.47	0.38	1.55	857.88	0.60	1.90	1,629.98	1.13
159	30486951	1.01	Rural Residential	550	555.05	0.39	1.55	860.33	0.60	1.90	1,634.62	1.14
160	30486954	1.01	Rural Residential	550	555.64	0.39	1.55	861.25	0.60	1.90	1,636.37	1.14
161	30486950	1.01	Rural Residential	550	554.80	0.39	1.55	859.94	0.60	1.90	1,633.88	1.13
162	30486953	1.01	Rural Residential	550	555.64	0.39	1.55	861.25	0.60	1.90	1,636.37	1.14
163	30447054	1.43	Rural Residential	550	784.86	0.55	1.55	1,216.53	0.84	1.90	2,311.42	1.61
164	30447055	1.74	Rural Residential	550	958.52	0.67	1.55	1,485.71	1.03	1.90	2,822.85	1.96
165	30447801	1.12	Rural Residential	550	615.54	0.43	1.55	954.09	0.66	1.90	1,812.77	1.26
166	30447082B	1.00	Rural Residential	550	550.77	0.38	1.55	853.69	0.59	1.90	1,622.02	1.13
167	30447794	1.15	Rural Residential	550	630.05	0.44	1.55	976.58	0.68	1.90	1,855.50	1.29
168	30447070B	1.27	Rural Residential	550	699.76	0.49	1.55	1,084.63	0.75	1.90	2,060.79	1.43
169	30447063	1.50	Rural Residential	550	825.00	0.57	1.55	1,278.75	0.89	1.90	2,429.63	1.69
170	30447385A	1.02	Rural Residential	550	563.37	0.39	1.55	873.23	0.61	1.90	1,659.13	1.15
171	30447385D	0.03	Rural Residential	550	15.49	0.01	1.55	24.01	0.02	1.90	45.63	0.03

#	Parcels, APN	Parcel Area	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
172	30447386D	0.00	Rural Residential	550	1.55	0.00	1.55	2.41	0.00	1.90	4.57	0.00
173	30447032G	1.21	Rural Residential	550	664.39	0.46	1.55	1,029.81	0.72	1.90	1,956.64	1.36
174	30447032M	1.25	Rural Residential	550	685.63	0.48	1.55	1,062.73	0.74	1.90	2,019.18	1.40
175	30447032P	1.45	Rural Residential	550	795.13	0.55	1.55	1,232.45	0.86	1.90	2,341.65	1.63
176	30447059	1.75	Rural Residential	550	964.31	0.67	1.55	1,494.67	1.04	1.90	2,839.88	1.97
177	30447043S	2.43	Rural Residential	550	1,337.05	0.93	1.55	2,072.42	1.44	1.90	3,937.60	2.73
178	30447043R	2.40	Rural Residential	550	1,321.63	0.92	1.55	2,048.52	1.42	1.90	3,892.20	2.70
179	30447043Q	2.40	Rural Residential	550	1,320.76	0.92	1.55	2,047.17	1.42	1.90	3,889.63	2.70
180	30447043P	2.40	Rural Residential	550	1,319.90	0.92	1.55	2,045.84	1.42	1.90	3,887.10	2.70
181	30447035F	2.40	Rural Residential	550	1,319.03	0.92	1.55	2,044.49	1.42	1.90	3,884.54	2.70
182	30447035D	1.20	Rural Residential	550	661.91	0.46	1.55	1,025.96	0.71	1.90	1,949.31	1.35
183	30447035E	1.19	Rural Residential	550	656.25	0.46	1.55	1,017.19	0.71	1.90	1,932.66	1.34
184	30447036A	4.79	Rural Residential	550	2,633.71	1.83	1.55	4,082.25	2.83	1.90	7,756.28	5.39
185	30447037A	0.99	Rural Residential	550	546.70	0.38	1.55	847.39	0.59	1.90	1,610.04	1.12
186	30447037C	1.40	Rural Residential	550	768.85	0.53	1.55	1,191.72	0.83	1.90	2,264.27	1.57
187	30447038	2.37	Rural Residential	550	1,304.27	0.91	1.55	2,021.61	1.40	1.90	3,841.07	2.67
188	30447039B	1.25	Rural Residential	550	687.88	0.48	1.55	1,066.21	0.74	1.90	2,025.80	1.41
189	30447039A	1.22	Rural Residential	550	670.56	0.47	1.55	1,039.36	0.72	1.90	1,974.79	1.37
190	30495957	1.22	Low Density Residential 1	1,350	1,648.08	1.14	1.55	2,554.52	1.77	1.90	4,853.59	3.37
191	30495925	0.28	Low Density Residential 1	1,350	381.01	0.26	1.55	590.57	0.41	1.90	1,122.08	0.78
192	30495924	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
193	30495955	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
194	30495973	0.38	Low Density Residential 1	1,350	519.27	0.36	1.55	804.86	0.56	1.90	1,529.24	1.06
195	30495958	0.05	Low Density Residential 1	1,350	64.77	0.04	1.55	100.40	0.07	1.90	190.76	0.13
196	30495975	0.52	Low Density Residential 1	1,350	697.72	0.48	1.55	1,081.46	0.75	1.90	2,054.78	1.43
197	30495926	0.40	Low Density Residential 1	1,350	542.85	0.38	1.55	841.42	0.58	1.90	1,598.70	1.11
198	30495927	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
199	30495974	0.38	Low Density Residential 1	1,350	516.60	0.36	1.55	800.73	0.56	1.90	1,521.39	1.06
200	30495928	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
201	30495954	0.28	Low Density Residential 1	1,350	381.82	0.27	1.55	591.82	0.41	1.90	1,124.45	0.78
202	30495953	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
203	30495952	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
204	30495965	2.06	Low Density Residential 1	1,350	2,778.13	1.93	1.55	4,306.10	2.99	1.90	8,181.59	5.68
205	30495951	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
206	30495950	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
207	30495949	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
208	30495948	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
209	30495947	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
210	30495946	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
211	30495945	0.28	Low Density Residential 1	1,350	381.82	0.27	1.55	591.82	0.41	1.90	1,124.45	0.78
212	30495960	0.05	Low Density Residential 1	1,350	64.77	0.04	1.55	100.40	0.07	1.90	190.76	0.13
213	30495935	0.54	Low Density Residential 1	1,350	723.10	0.50	1.55	1,120.80	0.78	1.90	2,129.53	1.48
214	30495936	0.41	Low Density Residential 1	1,350	552.80	0.38	1.55	856.84	0.60	1.90	1,627.99	1.13
215	30495933	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
216	30495930	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
217	30495961	0.04	Low Density Residential 1	1,350	53.93	0.04	1.55	83.58	0.06	1.90	158.81	0.11
218	30495931	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
219	30495929	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
220	30495932	0.38	Low Density Residential 1	1,350	512.14	0.36	1.55	793.81	0.55	1.90	1,508.25	1.05
221	30495934	0.38	Low Density Residential 1	1,350	516.66	0.36	1.55	800.83	0.56	1.90	1,521.57	1.06
222	30495944	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
223	30495937	0.41	Low Density Residential 1	1,350	550.79	0.38	1.55	853.72	0.59	1.90	1,622.06	1.13
224	30495938	0.41	Low Density Residential 1	1,350	550.72	0.38	1.55	853.62	0.59	1.90	1,621.88	1.13
225	30495939	0.38	Low Density Residential 1	1,350	510.56	0.35	1.55	791.36	0.55	1.90	1,503.59	1.04
226	30495940	0.28	Low Density Residential 1	1,350	381.79	0.27	1.55	591.77	0.41	1.90	1,124.36	0.78
227	30495941	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
228	30495942	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
229	30495943	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78

WATERLINE TANKSERLEY REPLACEMENT
Future Demands Summary



Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
230	30495959	1.75	Low Density Residential 1	1,350	2,365.57	1.64	1.55	3,666.63	2.55	1.90	6,966.60	4.84
231	30495921	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
232	30495922	0.28	Low Density Residential 1	1,350	381.85	0.27	1.55	591.87	0.41	1.90	1,124.55	0.78
233	30495923	0.28	Low Density Residential 1	1,350	381.88	0.27	1.55	591.91	0.41	1.90	1,124.64	0.78
234	30495964	0.28	Low Density Residential 1	1,350	384.17	0.27	1.55	595.47	0.41	1.90	1,131.39	0.79
235	30447042	0.15	Low Density Residential 1	1,350	207.64	0.14	1.55	321.85	0.22	1.90	611.51	0.42
236	30495963	0.14	Low Density Residential 1	1,350	184.56	0.13	1.55	286.06	0.20	1.90	543.52	0.38
237	30495962	0.40	Low Density Residential 1	1,350	536.06	0.37	1.55	830.90	0.58	1.90	1,578.71	1.10
238	30447024	0.06	Public (Schools)	920	52.80	0.04	1.55	81.84	0.06	1.90	155.50	0.11
239	30447018B	0.06	Public (Schools)	920	52.80	0.04	1.55	81.84	0.06	1.90	155.50	0.11
240	30447983	8.47	Public (Schools)	920	7,790.30	5.41	1.55	12,074.97	8.39	1.90	22,942.45	15.93
241	30447403	0.51	Commercial	1,010	511.33	0.36	1.55	792.56	0.55	1.90	1,505.87	1.05
242	30447406	0.12	Commercial	1,010	121.54	0.08	1.55	188.39	0.13	1.90	357.94	0.25
243	30447401	1.58	Commercial	1,010	1,591.28	1.11	1.55	2,466.49	1.71	1.90	4,686.33	3.25
244	30447404	0.10	Commercial	1,010	97.68	0.07	1.55	151.41	0.11	1.90	287.68	0.20
245	30447402	2.23	Commercial	1,010	2,250.82	1.56	1.55	3,488.77	2.42	1.90	6,628.67	4.60
246	30447405	0.44	Commercial	1,010	441.45	0.31	1.55	684.24	0.48	1.90	1,300.06	0.90
Sum =				185,718.47	128.97			287,863.63	199.91		546,940.89	379.82

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
Tankersley South												
1	30453065A	0.97	Rural Residential	550	531.38	0.37	1.55	823.63	0.57	1.90	1,564.90	1.09
2	30453064A	1.05	Rural Residential	550	577.22	0.40	1.55	894.69	0.62	1.90	1,699.92	1.18
3	30453063A	1.04	Rural Residential	550	573.21	0.40	1.55	888.47	0.62	1.90	1,688.09	1.17
4	30453066	1.11	Rural Residential	550	610.58	0.42	1.55	946.40	0.66	1.90	1,798.16	1.25
5	30453067	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
6	30453068	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
7	30453069	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
8	30453062A	1.04	Rural Residential	550	574.46	0.40	1.55	890.41	0.62	1.90	1,691.78	1.17
9	30453070	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
10	30453061A	1.05	Rural Residential	550	576.62	0.40	1.55	893.76	0.62	1.90	1,698.13	1.18
11	30453071	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
12	30453060A	1.06	Rural Residential	550	580.62	0.40	1.55	899.96	0.62	1.90	1,709.92	1.19
13	30453072	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
14	30453059	1.04	Rural Residential	550	574.43	0.40	1.55	890.37	0.62	1.90	1,691.70	1.17
15	30453073	1.01	Rural Residential	550	553.99	0.38	1.55	858.68	0.60	1.90	1,631.50	1.13
16	30453058	1.06	Rural Residential	550	582.35	0.40	1.55	902.64	0.63	1.90	1,715.02	1.19
17	30453074	1.00	Rural Residential	550	552.31	0.38	1.55	856.08	0.59	1.90	1,626.55	1.13
18	30453057	1.17	Rural Residential	550	641.01	0.45	1.55	993.57	0.69	1.90	1,887.77	1.31
19	30453016R	1.09	Rural Residential	550	598.51	0.42	1.55	927.69	0.64	1.90	1,762.61	1.22
20	30453016T	1.14	Rural Residential	550	625.05	0.43	1.55	968.83	0.67	1.90	1,840.77	1.28
21	30453016U	1.09	Rural Residential	550	596.83	0.41	1.55	925.09	0.64	1.90	1,757.67	1.22
22	30453555	1.12	Rural Residential	550	616.96	0.43	1.55	956.28	0.66	1.90	1,816.94	1.26
23	30453181A	1.05	Rural Residential	550	577.56	0.40	1.55	895.22	0.62	1.90	1,700.92	1.18
24	30453180	1.01	Rural Residential	550	556.82	0.39	1.55	863.07	0.60	1.90	1,639.83	1.14
25	30453181C	1.01	Rural Residential	550	557.12	0.39	1.55	863.54	0.60	1.90	1,640.72	1.14
26	30453084	1.11	Rural Residential	550	609.05	0.42	1.55	944.03	0.66	1.90	1,793.66	1.25
27	30453083	1.11	Rural Residential	550	607.79	0.42	1.55	942.08	0.65	1.90	1,789.94	1.24
28	30453085	1.01	Rural Residential	550	553.60	0.38	1.55	858.08	0.60	1.90	1,630.35	1.13
29	30453082	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
30	30453086	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
31	30453081	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
32	30453087	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
33	30453080	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
34	30453088	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
35	30453079	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
36	30453089	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
37	30453078	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
38	30453090	1.01	Rural Residential	550	553.96	0.38	1.55	858.65	0.60	1.90	1,631.43	1.13
39	30453077	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
40	30453091	1.00	Rural Residential	550	550.73	0.38	1.55	853.64	0.59	1.90	1,621.91	1.13
41	30453076	1.01	Rural Residential	550	553.95	0.38	1.55	858.63	0.60	1.90	1,631.39	1.13
42	30453092	1.01	Rural Residential	550	554.07	0.38	1.55	858.80	0.60	1.90	1,631.72	1.13
43	30453176D	1.76	Rural Residential	550	966.15	0.67	1.55	1,497.53	1.04	1.90	2,845.31	1.98
44	30453190	0.46	Rural Residential	550	250.47	0.17	1.55	388.22	0.27	1.90	737.63	0.51
45	30453191	0.30	Rural Residential	550	164.73	0.11	1.55	255.34	0.18	1.90	485.14	0.34
46	30453195	1.09	Rural Residential	550	597.87	0.42	1.55	926.69	0.64	1.90	1,760.72	1.22
47	30453177	1.08	Rural Residential	550	594.57	0.41	1.55	921.58	0.64	1.90	1,751.01	1.22
48	30453194	1.08	Rural Residential	550	595.06	0.41	1.55	922.35	0.64	1.90	1,752.46	1.22
49	30453175	1.09	Rural Residential	550	597.95	0.42	1.55	926.83	0.64	1.90	1,760.98	1.22
50	30453193	1.09	Rural Residential	550	598.18	0.42	1.55	927.18	0.64	1.90	1,761.65	1.22
51	30453189	1.09	Rural Residential	550	597.70	0.42	1.55	926.44	0.64	1.90	1,760.23	1.22
52	30453192	1.09	Rural Residential	550	597.22	0.41	1.55	925.69	0.64	1.90	1,758.82	1.22
53	30453188	1.08	Rural Residential	550	591.81	0.41	1.55	917.30	0.64	1.90	1,742.87	1.21
54	30453185	1.09	Rural Residential	550	598.66	0.42	1.55	927.93	0.64	1.90	1,763.06	1.22
55	30453016Z	1.09	Rural Residential	550	599.82	0.42	1.55	929.73	0.65	1.90	1,766.48	1.23

WATERLINE TANKSERLEY REPLACEMENT
Future Demands Summary



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				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
56	30453182	1.08	Rural Residential	550	595.63	0.41	1.55	923.23	0.64	1.90	1,754.13	1.22
57	30453016X	1.08	Rural Residential	550	595.20	0.41	1.55	922.56	0.64	1.90	1,752.87	1.22
58	30453186	1.09	Rural Residential	550	597.39	0.41	1.55	925.95	0.64	1.90	1,759.30	1.22
59	30453174	1.08	Rural Residential	550	596.06	0.41	1.55	923.89	0.64	1.90	1,755.40	1.22
60	30453184C	1.09	Rural Residential	550	597.44	0.41	1.55	926.03	0.64	1.90	1,759.45	1.22
61	30453184A	0.93	Rural Residential	550	513.85	0.36	1.55	796.47	0.55	1.90	1,513.29	1.05
62	30453029	1.10	Rural Residential	550	604.87	0.42	1.55	937.55	0.65	1.90	1,781.35	1.24
63	30453028	1.11	Rural Residential	550	609.49	0.42	1.55	944.72	0.66	1.90	1,794.96	1.25
64	30453030	1.01	Rural Residential	550	556.00	0.39	1.55	861.80	0.60	1.90	1,637.41	1.14
65	30453027	1.01	Rural Residential	550	555.48	0.39	1.55	860.99	0.60	1.90	1,635.89	1.14
66	30453031	1.00	Rural Residential	550	548.99	0.38	1.55	850.93	0.59	1.90	1,616.78	1.12
67	30453026	1.01	Rural Residential	550	555.53	0.39	1.55	861.07	0.60	1.90	1,636.04	1.14
68	30453032	1.01	Rural Residential	550	552.82	0.38	1.55	856.86	0.60	1.90	1,628.04	1.13
69	30453025	1.01	Rural Residential	550	555.19	0.39	1.55	860.54	0.60	1.90	1,635.03	1.14
70	30453033	1.00	Rural Residential	550	552.65	0.38	1.55	856.61	0.59	1.90	1,627.56	1.13
71	30453024	1.01	Rural Residential	550	554.84	0.39	1.55	860.00	0.60	1.90	1,633.99	1.13
72	30453034	1.01	Rural Residential	550	557.51	0.39	1.55	864.14	0.60	1.90	1,641.87	1.14
73	30453023	1.01	Rural Residential	550	554.49	0.39	1.55	859.47	0.60	1.90	1,632.99	1.13
74	30453035	1.00	Rural Residential	550	547.56	0.38	1.55	848.72	0.59	1.90	1,612.57	1.12
75	30453022	1.01	Rural Residential	550	554.15	0.38	1.55	858.94	0.60	1.90	1,631.98	1.13
76	30453036	1.01	Rural Residential	550	557.27	0.39	1.55	863.77	0.60	1.90	1,641.17	1.14
77	30453021	1.00	Rural Residential	550	550.57	0.38	1.55	853.38	0.59	1.90	1,621.42	1.13
78	30453037	1.00	Rural Residential	550	551.29	0.38	1.55	854.50	0.59	1.90	1,623.54	1.13
79	30453020D	1.27	Rural Residential	550	697.30	0.48	1.55	1,080.81	0.75	1.90	2,053.54	1.43
80	30453187	1.51	Rural Residential	550	828.06	0.58	1.55	1,283.49	0.89	1.90	2,438.62	1.69
81	30453020E	1.09	Rural Residential	550	598.90	0.42	1.55	928.30	0.64	1.90	1,763.76	1.22
82	30453183L	1.09	Rural Residential	550	597.35	0.41	1.55	925.89	0.64	1.90	1,759.19	1.22
83	30453183J	1.12	Rural Residential	550	615.15	0.43	1.55	953.48	0.66	1.90	1,811.62	1.26
84	30453183M	1.09	Rural Residential	550	597.35	0.41	1.55	925.89	0.64	1.90	1,759.19	1.22
85	30453183H	1.12	Rural Residential	550	616.12	0.43	1.55	954.99	0.66	1.90	1,814.48	1.26
86	30453183K	1.13	Rural Residential	550	619.99	0.43	1.55	960.98	0.67	1.90	1,825.86	1.27
87	30453183C	1.06	Rural Residential	550	584.08	0.41	1.55	905.32	0.63	1.90	1,720.11	1.19
88	30453205E	1.15	Rural Residential	550	633.85	0.44	1.55	982.47	0.68	1.90	1,866.69	1.30
89	30453183F	2.03	Rural Residential	550	1,118.47	0.78	1.55	1,733.63	1.20	1.90	3,293.90	2.29
90	30453205D	1.15	Rural Residential	550	633.67	0.44	1.55	982.20	0.68	1.90	1,866.17	1.30
91	30453205B	1.14	Rural Residential	550	628.23	0.44	1.55	973.76	0.68	1.90	1,850.14	1.28
92	30453183E	1.01	Rural Residential	550	557.99	0.39	1.55	864.89	0.60	1.90	1,643.29	1.14
93	30453205A	1.50	Rural Residential	550	825.96	0.57	1.55	1,280.24	0.89	1.90	2,432.45	1.69
94	30453183D	1.41	Rural Residential	550	777.17	0.54	1.55	1,204.62	0.84	1.90	2,288.77	1.59
95	30453047B	0.69	Rural Residential	550	380.98	0.26	1.55	590.53	0.41	1.90	1,122.00	0.78
96	30453046	1.10	Rural Residential	550	606.60	0.42	1.55	940.24	0.65	1.90	1,786.45	1.24
97	30453048	1.00	Rural Residential	550	551.38	0.38	1.55	854.63	0.59	1.90	1,623.80	1.13
98	30453045	1.01	Rural Residential	550	556.94	0.39	1.55	863.26	0.60	1.90	1,640.20	1.14
99	30453049	0.99	Rural Residential	550	546.72	0.38	1.55	847.41	0.59	1.90	1,610.08	1.12
100	30453044	1.01	Rural Residential	550	553.35	0.38	1.55	857.69	0.60	1.90	1,629.60	1.13
101	30453050	0.99	Rural Residential	550	546.00	0.38	1.55	846.30	0.59	1.90	1,607.96	1.12
102	30453043	1.01	Rural Residential	550	555.20	0.39	1.55	860.56	0.60	1.90	1,635.07	1.14
103	30453051	1.00	Rural Residential	550	548.32	0.38	1.55	849.90	0.59	1.90	1,614.80	1.12
104	30453042	1.01	Rural Residential	550	555.04	0.39	1.55	860.31	0.60	1.90	1,634.59	1.14
105	30453052	1.00	Rural Residential	550	548.70	0.38	1.55	850.48	0.59	1.90	1,615.92	1.12
106	30453041	1.01	Rural Residential	550	557.41	0.39	1.55	863.99	0.60	1.90	1,641.58	1.14
107	30453053	1.00	Rural Residential	550	550.86	0.38	1.55	853.83	0.59	1.90	1,622.28	1.13
108	30453040	1.00	Rural Residential	550	552.35	0.38	1.55	856.14	0.59	1.90	1,626.67	1.13
109	30453054	0.99	Rural Residential	550	546.21	0.38	1.55	846.63	0.59	1.90	1,608.59	1.12
110	30453039	1.01	Rural Residential	550	557.15	0.39	1.55	863.58	0.60	1.90	1,640.80	1.14
111	30453055	1.00	Rural Residential	550	548.37	0.38	1.55	849.98	0.59	1.90	1,614.95	1.12
112	30453038	1.00	Rural Residential	550	551.92	0.38	1.55	855.47	0.59	1.90	1,625.40	1.13
113	30453113	1.00	Rural Residential	550	547.89	0.38	1.55	849.23	0.59	1.90	1,613.54	1.12

WATERLINE TANKSERLEY REPLACEMENT
Future Demands Summary



Printed: 6/30/2017

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
114	30453112	0.99	Rural Residential	550	544.62	0.38	1.55	844.16	0.59	1.90	1,603.91	1.11
115	30453114	1.00	Rural Residential	550	552.29	0.38	1.55	856.04	0.59	1.90	1,626.48	1.13
116	30453111	1.00	Rural Residential	550	551.19	0.38	1.55	854.34	0.59	1.90	1,623.25	1.13
117	30453115	1.00	Rural Residential	550	548.21	0.38	1.55	849.72	0.59	1.90	1,614.47	1.12
118	30453110	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
119	30453116	0.99	Rural Residential	550	545.52	0.38	1.55	845.55	0.59	1.90	1,606.55	1.12
120	30453109	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
121	30453117	0.99	Rural Residential	550	546.34	0.38	1.55	846.82	0.59	1.90	1,608.97	1.12
122	30453108	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
123	30453118	1.00	Rural Residential	550	547.73	0.38	1.55	848.98	0.59	1.90	1,613.06	1.12
124	30453107	1.00	Rural Residential	550	549.57	0.38	1.55	851.83	0.59	1.90	1,618.49	1.12
125	30453119	1.00	Rural Residential	550	547.61	0.38	1.55	848.80	0.59	1.90	1,612.72	1.12
126	30453106	1.01	Rural Residential	550	554.28	0.38	1.55	859.13	0.60	1.90	1,632.36	1.13
127	30453120	1.00	Rural Residential	550	547.37	0.38	1.55	848.43	0.59	1.90	1,612.02	1.12
128	30453105	0.99	Rural Residential	550	545.34	0.38	1.55	845.28	0.59	1.90	1,606.03	1.12
129	30453047A	0.31	Rural Residential	550	171.50	0.12	1.55	265.83	0.18	1.90	505.07	0.35
130	30453007X	0.16	Rural Residential	550	86.63	0.06	1.55	134.27	0.09	1.90	255.12	0.18
131	30453366	1.03	Rural Residential	550	567.50	0.39	1.55	879.63	0.61	1.90	1,671.29	1.16
132	30453367	1.04	Rural Residential	550	572.99	0.40	1.55	888.14	0.62	1.90	1,687.46	1.17
133	30453368	1.04	Rural Residential	550	569.42	0.40	1.55	882.60	0.61	1.90	1,676.94	1.16
134	30453210A	1.37	Rural Residential	550	754.10	0.52	1.55	1,168.86	0.81	1.90	2,220.83	1.54
135	30453369	1.06	Rural Residential	550	580.82	0.40	1.55	900.27	0.63	1.90	1,710.52	1.19
136	30453240	0.36	Rural Residential	550	199.47	0.14	1.55	309.18	0.21	1.90	587.44	0.41
137	30453143	1.09	Rural Residential	550	601.00	0.42	1.55	931.55	0.65	1.90	1,769.94	1.23
138	30453145	1.04	Rural Residential	550	570.15	0.40	1.55	883.73	0.61	1.90	1,679.10	1.17
139	30453147	0.20	Rural Residential	550	112.08	0.08	1.55	173.73	0.12	1.90	330.09	0.23
140	30453144	1.10	Rural Residential	550	602.98	0.42	1.55	934.62	0.65	1.90	1,775.78	1.23
141	30453146	1.06	Rural Residential	550	581.01	0.40	1.55	900.57	0.63	1.90	1,711.07	1.19
142	30453142A	1.09	Rural Residential	550	599.94	0.42	1.55	929.90	0.65	1.90	1,766.81	1.23
143	30453142B	1.04	Rural Residential	550	569.70	0.40	1.55	883.03	0.61	1.90	1,677.76	1.17
144	30453139A	1.07	Rural Residential	550	586.12	0.41	1.55	908.49	0.63	1.90	1,726.13	1.20
145	30453141	1.14	Rural Residential	550	626.82	0.44	1.55	971.57	0.67	1.90	1,845.98	1.28
146	30453056	0.62	Rural Residential	550	340.51	0.24	1.55	527.78	0.37	1.90	1,002.79	0.70
147	30453153	1.17	Rural Residential	550	646.21	0.45	1.55	1,001.63	0.70	1.90	1,903.09	1.32
148	30453154	1.17	Rural Residential	550	643.89	0.45	1.55	998.03	0.69	1.90	1,896.25	1.32
149	30453152	1.00	Rural Residential	550	552.36	0.38	1.55	856.16	0.59	1.90	1,626.70	1.13
150	30453155	1.00	Rural Residential	550	552.31	0.38	1.55	856.08	0.59	1.90	1,626.55	1.13
151	30453156	1.00	Rural Residential	550	549.66	0.38	1.55	851.97	0.59	1.90	1,618.75	1.12
152	30453151	1.00	Rural Residential	550	550.40	0.38	1.55	853.13	0.59	1.90	1,620.94	1.13
153	30453159	0.81	Rural Residential	550	448.06	0.31	1.55	694.49	0.48	1.90	1,319.52	0.92
154	30453150	1.01	Rural Residential	550	554.19	0.38	1.55	889.00	0.60	1.90	1,632.10	1.13
155	30453157	1.01	Rural Residential	550	555.64	0.39	1.55	861.25	0.60	1.90	1,636.37	1.14
156	30453149	1.00	Rural Residential	550	552.23	0.38	1.55	855.96	0.59	1.90	1,626.33	1.13
157	30453158	1.01	Rural Residential	550	552.89	0.38	1.55	856.98	0.60	1.90	1,628.27	1.13
158	30453148	1.04	Rural Residential	550	574.12	0.40	1.55	889.88	0.62	1.90	1,690.77	1.17
159	30453135	1.13	Rural Residential	550	619.13	0.43	1.55	959.65	0.67	1.90	1,823.33	1.27
160	30453166B	1.15	Rural Residential	550	633.27	0.44	1.55	981.57	0.68	1.90	1,864.98	1.30
161	30453165E	1.15	Rural Residential	550	632.59	0.44	1.55	980.51	0.68	1.90	1,862.97	1.29
162	30453101	2.50	Rural Residential	550	1,375.00	0.95	1.55	2,131.25	1.48	1.90	4,049.38	2.81
163	30453166A	1.04	Rural Residential	550	572.69	0.40	1.55	887.67	0.62	1.90	1,686.57	1.17
164	30453166D	1.04	Rural Residential	550	572.02	0.40	1.55	886.63	0.62	1.90	1,684.60	1.17
165	30453165F	1.04	Rural Residential	550	571.96	0.40	1.55	886.53	0.62	1.90	1,684.41	1.17
166	30453165G	1.06	Rural Residential	550	580.78	0.40	1.55	900.21	0.63	1.90	1,710.41	1.19
167	30453166F	1.10	Rural Residential	550	606.38	0.42	1.55	939.88	0.65	1.90	1,785.78	1.24
168	30453165H	1.06	Rural Residential	550	580.82	0.40	1.55	900.27	0.63	1.90	1,710.52	1.19
169	30453166E	1.10	Rural Residential	550	605.45	0.42	1.55	938.45	0.65	1.90	1,783.06	1.24
170	30453165A	1.04	Rural Residential	550	572.13	0.40	1.55	886.81	0.62	1.90	1,684.93	1.17
171	30453166C	1.00	Rural Residential	550	548.84	0.38	1.55	850.70	0.59	1.90	1,616.33	1.12

#	Parcels, APN	Parcel Area acres	Parcel Land Use	Average Day Demands			Max Day Demands			Peaking Hour Demands		
				Unit Demand gal/day-acre	Average Day Water Demand gal/day	Average Day Water Demand gal/min	Peaking Factor	Max Day Water Demand gal/day	Max Day Water Demand gal/min	Peaking Factor	Peak Hour Water Demand gal/day	Peak Hour Water Demand gal/min
172	30453165C	1.09	Rural Residential	550	598.99	0.42	1.55	928.43	0.64	1.90	1,764.03	1.23
173	30453161B	2.29	Commercial	1,010	2,311.13	1.60	1.55	3,582.25	2.49	1.90	6,806.27	4.73
174	30453100	2.50	Commercial	1,010	2,525.00	1.75	1.55	3,913.75	2.72	1.90	7,436.13	5.16
175	30453215	1.21	Commercial	1,010	1,225.70	0.85	1.55	1,899.84	1.32	1.90	3,609.70	2.51
176	30453214	1.21	Rural Residential	550	666.73	0.46	1.55	1,033.43	0.72	1.90	1,963.52	1.36
177	30453104	2.42	Commercial	1,010	2,446.82	1.70	1.55	3,792.56	2.63	1.90	7,205.87	5.00
178	30453213	1.21	Rural Residential	550	667.77	0.46	1.55	1,035.04	0.72	1.90	1,966.57	1.37
179	30453212	1.20	Commercial	1,010	1,215.90	0.84	1.55	1,884.64	1.31	1.90	3,580.81	2.49
180	30453103	2.41	Commercial	1,010	2,436.36	1.69	1.55	3,776.36	2.62	1.90	7,175.08	4.98
181	30453015V	4.97	Commercial	1,010	5,018.05	3.48	1.55	7,777.98	5.40	1.90	14,778.15	10.26
182	30453173C	2.42	Commercial	1,010	2,448.60	1.70	1.55	3,795.33	2.64	1.90	7,211.13	5.01
183	30453216	2.72	Commercial	1,010	2,750.58	1.91	1.55	4,263.40	2.96	1.90	8,100.46	5.63
184	30453221	0.65	Commercial	1,010	660.63	0.46	1.55	1,023.97	0.71	1.90	1,945.55	1.35
185	30453171A	2.43	Commercial	1,010	2,456.95	1.71	1.55	3,808.27	2.64	1.90	7,235.71	5.02
186	30453009Z	1.15	Rural Residential	550	631.16	0.44	1.55	978.30	0.68	1.90	1,858.77	1.29
187	30453197	1.08	Rural Residential	550	592.99	0.41	1.55	919.14	0.64	1.90	1,746.36	1.21
188	30453162	1.15	Rural Residential	550	631.35	0.44	1.55	978.59	0.68	1.90	1,859.33	1.29
189	30453198	1.08	Rural Residential	550	593.76	0.41	1.55	920.33	0.64	1.90	1,748.63	1.21
190	30453163	1.15	Rural Residential	550	631.33	0.44	1.55	978.55	0.68	1.90	1,859.25	1.29
191	30453199	1.08	Rural Residential	550	593.70	0.41	1.55	920.23	0.64	1.90	1,748.45	1.21
192	30453164	1.15	Rural Residential	550	631.44	0.44	1.55	978.73	0.68	1.90	1,859.59	1.29
193	30453200	1.08	Rural Residential	550	593.80	0.41	1.55	920.39	0.64	1.90	1,748.74	1.21
194	30453168	1.15	Rural Residential	550	630.00	0.44	1.55	976.50	0.68	1.90	1,855.35	1.29
195	30453009N	1.15	Rural Residential	550	634.66	0.44	1.55	983.72	0.68	1.90	1,869.07	1.30
196	30453167	1.15	Rural Residential	550	630.33	0.44	1.55	977.01	0.68	1.90	1,856.32	1.29
197	30453238	0.41	Rural Residential	550	225.95	0.16	1.55	350.22	0.24	1.90	665.41	0.46
198	30453121	0.55	Rural Residential	550	302.58	0.21	1.55	468.99	0.33	1.90	891.09	0.62
199	30453201	1.08	Rural Residential	550	593.74	0.41	1.55	920.29	0.64	1.90	1,748.56	1.21
200	30453140	1.03	Rural Residential	550	563.98	0.39	1.55	874.16	0.61	1.90	1,660.91	1.15
201	30453139E	1.03	Rural Residential	550	568.86	0.40	1.55	881.74	0.61	1.90	1,675.30	1.16
202	30453139D	1.03	Rural Residential	550	568.86	0.40	1.55	881.74	0.61	1.90	1,675.30	1.16
203	30453139C	0.99	Rural Residential	550	543.47	0.38	1.55	842.38	0.58	1.90	1,600.53	1.11
204	30453006F	1.64	Rural Residential	550	903.27	0.63	1.55	1,400.07	0.97	1.90	2,660.13	1.85
205	30453006G	1.83	Rural Residential	550	1,007.17	0.70	1.55	1,561.12	1.08	1.90	2,966.12	2.06
206	30453014F	1.29	Rural Residential	550	708.43	0.49	1.55	1,098.07	0.76	1.90	2,086.34	1.45
207	30453554	1.09	Commercial	1,010	1,099.17	0.76	1.55	1,703.72	1.18	1.90	3,237.07	2.25
208	30453553	1.46	Commercial	1,010	1,472.22	1.02	1.55	2,281.94	1.58	1.90	4,335.69	3.01
209	30453361A	7.53	Low Density Residential 1	1,350	10,166.47	7.06	1.55	15,758.02	10.94	1.90	29,940.25	20.79
210	30453556	2.06	Low Density Residential 1	1,350	2,776.08	1.93	1.55	4,302.93	2.99	1.90	8,175.57	5.68
211	30453016H	1.09	Low Density Residential 1	1,350	1,469.57	1.02	1.55	2,277.83	1.58	1.90	4,327.87	3.01
212	30453014G	33.66	Low Density Residential 1	1,350	45,442.96	31.56	1.55	70,436.60	48.91	1.90	133,829.53	92.94
213	30453361A	7.53	Low Density Residential 1	1,350	10,166.47	7.06	1.55	15,758.02	10.94	1.90	29,940.25	20.79
214	30453556	2.06	Low Density Residential 1	1,350	2,776.08	1.93	1.55	4,302.93	2.99	1.90	8,175.57	5.68
215	30453016H	1.09	Low Density Residential 1	1,350	1,469.57	1.02	1.55	2,277.83	1.58	1.90	4,327.87	3.01
216	30453160A	2.99	Commercial	1,010	3,016.81	2.10	1.55	4,676.05	3.25	1.90	8,884.50	6.17
217	30453371	2.82	Commercial	1,010	2,849.15	1.98	1.55	4,416.18	3.07	1.90	8,390.73	5.83
218	30453370	11.25	Commercial	1,010	11,366.35	7.89	1.55	17,617.84	12.23	1.90	33,473.90	23.25
219	30453239	0.21	Commercial	1,010	209.93	0.15	1.55	325.39	0.23	1.90	618.24	0.43

Sum = 232,174.38

161.23

359,870.28

249.91

683,753.54

474.83



APPENDIX E

Parcels Requiring Additional Easement Research



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

**WATERLINE TANKSERLEY REPLACEMENT
Parcels Requiring Additional Easement Research**

August 14, 2017



Printed: 8/11/2017

Tankersley North

APN Number	Property Owner	Property Address
304-80-983	MORTENSEN MICHAEL L/AUTUMN V	16548 E PECOS RD GILBERT AZ 85295
304-47-398	CONNELL EDWARD SCOTT/ANNA LOUISE	3011 E KESLER LN GILBERT AZ 85295
304-47-399A	WILLIAMS TARIK/JAMIE TRUSTEES	3037 E KESLER LN GILBERT AZ 85295
304-47-396B	E AND K PLYES FAMILY TRUST	3037 E KESLER LN GILBERT AZ 85295
304-47-397A	KELLER FAMILY TRUST	3091 E KESLER LN GILBERT AZ 85295
304-47-395A	SOKOLOWSKI PIOTR B/STILIANA	3121 E KESLER LN GILBERT AZ 85295
304-47-406	PECOS GILBERT CVS LLC	2100 WHARTON ST 700 PITTSBURG PA 15203 *
304-47-401	SCP 204E 011 LLC	3170 S HIGLEY RD GILBERT AZ 85295
304-47-403	PECOS GILBERT CVS LLC	2100 WHARTON ST 700 PITTSBURG PA 15203 *
304-80-982	HARRIS KEVIN W/ADELFA R	2649 S ROANOKE ST GILBERT AZ 85295 *
304-47-392A	FUENTES FAMILY LIVING TRUST	3010 E KESLER LN GILBERT AZ 85295
304-47-392B	TAYLOR CLINT L/SILVA NORAH	3032 E KESLER LN GILBERT AZ 85295
304-47-013Z	ANDERSEN JAY D/CINDY	3054 E KESLER LN GILBERT AZ 85295
304-47-013Y	A&A BRANCH LIVING TRUST	3076 E KESLER LN GILBERT AZ 85295
304-47-013X	SCOTT AND JILL BROWN FAMILY TRUST	3100 E KESLER LN GILBERT AZ 85295
304-47-013W	DIAMOND MATTHEW D/SUSAN E	120 E KESLER LN GILBERT AZ 85295
304-47-405	HIGLEY SHOPS LLC/KAJDRJ PROPERTIES LLC	PO BOX 17038 SALT LAKE CITY UT 84117 *
304-47-402	HIGLEY SHOPS LLC/KAJDRJ PROPERTIES LLC	3126 S HIGLEY RD GILBERT AZ 85295
304-47-390	JORGENSEN CHAD C/MELISSA A	16555 E FAIRVIEW ST GILBERT AZ 85295
304-47-013L	RUTT TIMOTHY DEAN/KRISTINE LEE	16844 E FAIRVIEW LN GILBERT AZ 85295
304-47-013K	HORNBECK GERALD C & JO ANN L	16842 E FAIRVIEW LN GILBERT AZ 85295
304-47-013J	EVE MARK ERIC/DEBRA LEE	16840 E FAIRVIEW LN GILBERT AZ 85295
304-47-013M	OROZCO M ESTELA B	16838 E FAIRVIEW LN GILBERT AZ 85295
304-47-013N	RIEDLINGER DON/CAROLYN	16824 S HIGLEY RD GILBERT AZ 85295
304-47-803	RIEDLINGER DON/CAROLYN	3080 S HIGLEY RD GILBERT AZ 85295
304-47-021L	RICHINS KRISTEN/JOHN S	16526 E FAIRVIEW ST GILBERT AZ 85295
304-47-053	PAYNE TERESA	16610 E FAIRVIEW ST GILBERT AZ 85295
304-47-021V	RICHINS JOHN S/KRISTEN A	16630 E FAIRVIEW ST GILBERT AZ 85295
304-47-021U	CARPENTER REVOCABLE TRUST	16626 S 166TH ST GILBERT AZ 85295
304-47-023X	COOLE JASON/JEANIE N	16609 E ELGIN ST GILBERT AZ 85295
304-47-021Z	BURKE BARRY LEE/MICHELLE LAIDLAW TR	16630 S 166TH ST GILBERT AZ 85295
304-47-021Y	THATCHER DENNIS L & DEBRA G	16540 E ELGIN ST GILBERT AZ 85295
304-47-023Q	MCCELLAN STEVEN	16610 E ELGIN ST GILBERT AZ 85295
304-47-023Y	HEARTQUIST SCOTT/CHRISTINA	16625 E ELGIN ST GILBERT AZ 85295
304-47-023S	ALBIN JOHN ROBERT/JANE MARIE	16626 E ELGIN RD GILBERT AZ 85295 *
304-47-023R	ALBIN JOHN R/JANE G	16626 E ELGIN ST GILBERT AZ 85295
304-47-023Z	MOHRBACKER JOHN C	16631 E ELGIN ST GILBERT AZ 85295
304-47-079	PIERSKALLA LIVING TRUST	16640 E ELGIN ST GILBERT AZ 85295
304-47-050	RODRIQUEZ GRETCHEN/GREGORY	16645 E ELGIN ST GILBERT AZ 85295
304-47-078	FOWLER GRAY/KAREN	16650 E ELGIN ST GILBERT AZ 85295
304-47-051	KING JOHN M	16715 E ELGIN ST GILBERT AZ 85295
304-47-077	COLLIER MARK A/CAMMI R	16718 E ELGIN ST GILBERT AZ 85295
304-47-797	GOTTWALD BRADLEY J	16507 E FRYE RD GILBERT AZ 85295
304-47-023L	DRAKE HAL JOE/JOSEPH DARIN	16744 E ELGIN ST GILBERT AZ 85295
304-47-796A	GOTTWALD BRADLEY J	16747 E ELGIN ST GILBERT AZ 85295
304-47-965	WARNER MICHELE A/CAMPBELL COLIN T	16788 E ELGIN ST GILBERT AZ 85295
304-47-033D	DUNCAN WILLIAM R TR	16104 E FAIRVIEW ST GILBERT AZ 85295
304-47-076	HANCOCK S SCOTT	16114 E FAIRVIEW ST GILBERT AZ 85295
304-47-074	VAUGHT JEREMIE/PAMELA	16108 E FAIRVIEW ST GILBERT AZ 85295
304-47-073	LAWRENCE ROBERT K	16110 E FAIRVIEW ST GILBERT AZ 85295
304-47-029C	KNIGHT MARK	16115 E FRYE RD GILBERT AZ 85295
304-47-029F	FRYE ROAD HORSE PROPERTIES LLC	16119 E FRYE RD GILBERT AZ 85295

* Mailing Address



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

**WATERLINE TANKSERLEY REPLACEMENT
Parcels Requiring Additional Easement Research**

August 14, 2017



Printed: 8/11/2017

Tankersley South

APN Number	Property Owner	Property Address
304-53-216	CARROLL EDWIN E/MARGARET L TR	2123 E PECOS RD GILBERT 85295
304-53-553	TAIT INVESTMENTS LLC	2197 E PECOS RD GILBERT 85295
304-53-173C	HICKS BOBBY R SR/SUSAN L TR	2078 E LONGHORN DR GILBERT 85297
304-53-171A	HALVERSON CHRISTOPHER MICHAEL/CHRISTINE LYNET	2018 E LONGHORN DR GILBERT 85297
304-53-212	CARROTHERS DARRIN/ROXANNE	2036 E WYATT WY GILBERT 85297
304-53-213	OLSON LIVING TRUST	2050 E WYATT WY GILBERT 85297
304-53-214	REGINATO MICHAEL J/BOBBI	2086 E WYATT WY GILBERT 85297
304-53-215	SMITH MARTIN	2116 E WYATT WY GILBERT 85297
304-53-104	BOOTH STUART L	3348 S 157TH PL GILBERT 85297
304-53-103	HICKS BOB R SR/SUSAN L/HALVERSON C M/C L	2057 E WYATT WY GILBERT 85297
304-53-015V	WINTERTON KENT B/CINDA G TR	3311 S 157TH PL GILBERT 85297
304-53-100	BOOTH STUART	3345 S 157TH PL GILBERT 85297
304-53-101	CHOATE CECIL L/DARNELL-CHOATE TR	3397 S 157TH PL GILBERT 85297
304-53-161B	SCOOBY-SCRAPPY DOO TRUST	3382 S 157TH PL GILBERT 85297
304-53-160A	VERQUER ROGER VERNE	2030 E BONANZA RD GILBERT 85297
304-53-197	VINCENT NANCI S/STAPLEY GARY C	15643 E LEXINGTON ST GILBERT 85297
304-53-009Z	MULLEN DEBORAH L	3415 S 157TH ST GILBERT 85297
304-53-198	BOYSE BRENT R/TRACY E	3440 S 157TH ST GILBERT 85297
304-53-162	KRUSER KRISTOPHER J/SHERRI L	3435 S 157TH ST GILBERT 85297
304-53-199	CHRIS AND MONICA ANDERSON FAMILY TRUST	3474 S 157TH ST GILBERT 85297
304-53-163	KENTNER JAMES/MARGARET TR	3477 S 157TH ST GILBERT 85297
304-53-200	M&D RIGGS REVOCABLE TRUST	3506 S 157TH ST GILBERT 85297
304-53-164	LILES JAMES P/VERONICA G	3509 S 157TH ST GILBERT 85297
304-53-201	BEHLING MICHAEL B/SHERYL D	3534 S 157TH ST GILBERT 85297
304-53-168	HARRISON JAMES H/PAMELA L	3541 S 157TH ST GILBERT 85297
304-53-009N	RODRIQUEZ ANTHONY C/LYNN G	3568 S 157TH ST GILBERT 85297
304-53-167	STRONGHAIR MARK J/SUSAN S	3567 S 157TH ST GILBERT 85297
304-53-165E	-	3406 S 157TH WY GILBERT 85297
304-53-166B	PETERSON LAYNE GEORGE	3417 S 157TH WY GILBERT 85297
304-53-165F	JOBE JORDAN/BETH	3442 S 157TH WY GILBERT 85297
304-53-166A	BENNETT WILLIAM BRYSON	3457 S 157TH WY GILBERT 85297
304-53-165G	RICHARD G SCHULDT AND LORRAINE S SCHULDT REV	3472 S 157TH WY GILBERT 85297
304-53-166D	DICKER TIMOTHY W/CONNIE L	3485 S 157TH WY GILBERT 85297
304-53-165H	JOBE RACHEL PANDA RANDALL	3504 S 157TH WY GILBERT 85297
304-53-166F	JOBE KARIN E	3515 S 157TH WY GILBERT 85297
304-53-165A	TUPPER GARY A	3536 S 157TH WY GILBERT 85297
304-53-166E	JOBE JUSTIN	3543 S 157TH WY GILBERT 85297
304-53-165C	PARASCANDOLA JILL ANN	3566 S 157TH WY GILBERT 85297
304-53-166C	WAGGONER TONY L/JANICE E	3569 S 157TH WY GILBERT 85297
304-53-135	RICHARD AND GINGER MEYER REVOCABLE TRUST	2231 E BONANZA RD GILBERT 85297
304-53-148	RANDY AND GLADYS PHILLIPS 2016 TRUST	2265 E BONANZA RD GILBERT 85297
304-53-158	DALTON MARTIN R/JACQUELYN L	3444 S 158TH PL GILBERT 85297
304-53-149	BICKHAM AARON D/REBECCA R	3447 S 158TH PL GILBERT 85297
304-53-157	HOUSLEY SEAN M/LAURA L	3470 S 158TH PL GILBERT 85297
304-53-150	HALLADAY HAL	3479 S 158TH PL GILBERT 85297
304-53-156	PACE JONATHAN C/MINDY K	3512 S 158TH PL GILBERT 85297
304-53-151	MESSANG TIM I/PAGE	3511 S 158TH PL GILBERT 85297
304-53-155	SIMMONS SCOTT G/BRANDI B	3538 S 158TH PL GILBERT 85297
304-53-152	PERRY JASON LAWRENCE/MELISSA B	3535 S 158TH PL GILBERT 85297
304-53-154	HELMHOUT NORMAN E/MARY ALICE/HILL IVAN C/PATR	3574 S 158TH PL GILBERT 85297
304-53-153	KUSAK DARCY	3573 S 158TH PL GILBERT 85297
304-53-159	HOME PLACE ACRES INC	17935 E 158TH PL GILBERT AZ 85296
304-53-140	GREGORY LAURA L/WILLIAM H	3428 S 159TH ST GILBERT 85297
304-53-141	RICHINS KRISTEEAN A	3480 S 159TH ST GILBERT 85297



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

**WATERLINE TANKSERLEY REPLACEMENT
Parcels Requiring Additional Easement Research**

August 14, 2017



Printed: 8/11/2017

APN Number	Property Owner	Property Address
304-53-142B	SACHA BLAKE A/CYNTHIA L TR	3514 S 159TH ST GILBERT 85297
304-53-146	FELDMAN GILBERT/SHEILA	3526 S 159TH ST GILBERT 85297
304-53-145	TAWILL MAHMOUD K/JAMAL KADRI	3542 S 159TH ST GILBERT 85297
304-53-143	WILKE HENRY J/TERESA L	3543 S 159TH ST GILBERT 85297
304-53-144	KOCH JARED A/RACHAEL	3531 S 159TH ST GILBERT 85297
304-53-147	IREFLY FUNDING GROUP	2243 E CLAXTON ST GILBERT 85297 *
304-53-142A	YOUNG JONATHAN C/MAY	3517 S 159TH ST GILBERT 85297
304-53-139A	ALEXANDER FAMILY LLC	3475 S 159TH ST GILBERT 85297
304-53-139E	ALEXANDER ERIC/KOKALIARES THOMAS	3465 S 159TH ST GILBERT 85297
304-53-139D	CASH TODD	3437 S 159TH ST GILBERT 85297
304-53-139C	HUGHES DARIN R/JENNIFER K	3409 S 159TH ST GILBERT 85297
304-53-187	RANSOM BRYAN C	2168 E MAPLEWOOD ST GILBERT 85297
304-53-020E	WAGNER ERIC MATTHEW/MIYOUNG N	2169 E MAPLEWOOD ST GILBERT 85297
304-53-183L	LOFGREEN CHRISTOPHER DAVID/JENNIFER ELIZABETH	2148 E MAPLEWOOD ST GILBERT 85297
304-53-183M	KIERAN JAMES M/OLGA	2128 E MAPLEWOOD ST GILBERT 85297
304-53-183K	2108 E MAPLEWOOD ST GILBERT 85297	2108 E MAPLEWOOD ST GILBERT 85297
304-53-205E	MCDOWELL MICHAEL J/LISA W	2088 E MAPLEWOOD ST GILBERT 85297
304-53-205D	STANDLEY BRADLEY J/SWEENEY JENNIFER M	2058 E MAPLEWOOD ST GILBERT 85297
304-53-205B	GANESH VASUDEV/SABI	2038 E MAPLEWOOD ST GILBERT 85297
304-53-205A	HASSAN ELSAAD	2018 E MAPLEWOOD ST GILBERT 85297
304-53-183D	ALLEN AND LAVERNE GAIL MATTISON REV LIV TRUST	2019 E MAPLEWOOD ST GILBERT 85297
304-53-183E	HASAN KHALID S/RENU TR	2039 E MAPLEWOOD ST GILBERT 85297
304-53-183F	NEW VENTURES INVESTMENTS	2079 E MAPLEWOOD ST GILBERT 85297
304-53-183C	TUNNY THOMAS M/JUDITH M	2109 E MAPLEWOOD ST GILBERT 85297
304-53-183H	FERGUSON WADE C/LANEL T	2129 E MAPLEWOOD ST GILBERT 85297
304-53-183J	WALKER GLENN LEE	2149 E MAPLEWOOD ST GILBERT 85297
304-53-020D	NELSON CHRISTOPHER J/ELIZABETH M TR	2199 E MAPLEWOOD ST GILBERT 85297
304-53-190	DAHL MELINDA L	3801 E MARILYN RD PHOENIX AZ 85032 *
304-53-191	MATHEUS CARRIE A	2160 E MELROSE ST GILBERT AZ 85297 *
304-53-195	MATHEUS CARRIE A/THOMAS F	2160 E MELROSE ST GILBERT 85297
304-53-194	KOHL LISA/ANTHONY	2140 E MELROSE ST GILBERT 85297
304-53-193	BAILEY ABDUL M/LINDSAY M	2110 E MELROSE ST GILBERT 85297
304-53-192	FREDERICK L STEYER AND RHEA W STEYER LIV TR	2090 E MELROSE ST GILBERT 85297
304-53-185	BULLOCK RYAN	2070 E MELROSE ST GILBERT 85297
304-53-182	AYERS CHARLES/CYNTHIA	2050 E MELROSE ST GILBERT 85297
304-53-186	BRINKLEY BRIAN P/JENNIFER L	2030 E MELROSE ST GILBERT 85297
304-53-184C	BARR ARON D/ANDREA L	2010 E MELROSE ST GILBERT 85297
304-53-184A	CAMERON HENRY D/CAROLYN D	2011 E MELROSE ST GILBERT 85297
304-53-174	VARK CHARLES E JR/SALLY A	2031 E MELROSE ST GILBERT 85297
304-53-016X	LANGLEY TODD C/MARGARET E	2051 E MELROSE ST GILBERT 85297
304-53-016Z	HESS FRED/SANDRA	2071 E MELROSE ST GILBERT 85297
304-53-188	ANDERS NATHAN E	2091 E MELROSE ST GILBERT 85297
304-53-189	CHAVEZ ALEXIE C	2111 E MELROSE ST GILBERT 85297
304-53-175	RODRIQUEZ HENRY C/KAREN C	2141 E MELROSE ST GILBERT 85297
304-53-177	NIX MARK/LAURA	2161 E MELROSE ST GILBERT 85297
304-53-176D	HARRIS DUENA A/GARY	2201 E MELROSE ST GILBERT 85297
304-53-181C	HUBER ERNEST CLARK/PATRICIA TR	2153 E CLAXTON ST GILBERT 85297
304-53-180	JOHNSON JOHN L	2143 E CLAXTON ST GILBERT 85297
304-53-181A	DANA LIVING TRUST	2142 E CLAXTON ST GILBERT 85297
304-53-016U	JONES RICHARD T/LINDA A	2172 E CLAXTON ST GILBERT 85297
304-53-016R	ELLSWORTH DUANE/ANGELA S	2192 E CLAXTON ST GILBERT 85297
304-53-016T	WEBB MICHAEL B/BROOKE	2193 E CLAXTON ST GILBERT 85297
304-53-555	SHEYDAYI SUSAN DAVID	2173 E CLAXTON ST GILBERT 85297
304-53-370	CANYON OAKS ESTATES L P	2019 E WOODSIDE CT GILBERT 85297

* Mailing Address



APPENDIX F

Lots on Which an Easement is Required to Serve an Adjacent Lot



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

**WATERLINE TANKSERLEY REPLACEMENT
Parcels Impacted by New Easements**

August 14, 2017



Printed: 8/11/2017

Tankersley North

APN Number	Property Owner	Property Address
304-47-072D	HAYES WILLIAM A III/CORI	16120 E FAIRVIEW ST GILBERT 85295
304-47-027C	HEFNER GARY/KAREN K	16238 E FAIRVIEW ST GILBERT 85295
304-47-026C	PRICE MATHEW D/RUSSEL ASHLEY M	16244 E FAIRVIEW ST GILBERT 85295
304-47-065C	DOTSON SHAWN R	16306 E FAIRVIEW ST GILBERT 85295
304-47-064A	RUETTINGER LARRY A/LEANN	16322 E FAIRVIEW ST GILBERT 85295
304-47-030F	MARTINEZ TONY/BARBARA J	16247 E FRYE RD GILBERT 85295
304-47-032P	DAVIS JEFFREY E/CHRISTI A	16317 E FRYE RD GILBERT 85295
304-47-032M	BIBELOW CONTRACTING INC/TASK-PRO LLC	16339 E FRYE RD GILBERT 85295
304-47-032H	SAMANTHA BEAUTY CORPORATION	16506 S 164TH ST GILBERT 85295
304-47-037C	BEJARANO ANTHONY P	16305 E FAIRVIEW ST GILBERT 85295
304-47-035E	BOYSE STUART/MARIE	16219 E FAIRVIEW ST GILBERT 85295
304-47-061	16434 FAIRVIEW LLC	16434 E FAIRVIEW ST GILBERT 85295
304-47-393	FINTER AARON M/Stacy E	16506 E FAIRVIEW ST GILBERT 85295
304-47-081	BUTLER NOLAN J/BETTY	16508 E FAIRVIEW ST GILBERT 85295
304-47-091	RAHORN RICHARD A/VERONICA V	16524 E FAIRVIEW ST GILBERT 85295
304-80-988	MULLINS NATHAN J/KELLI	16435 E FAIRVIEW ST GILBERT AZ 85295 *
304-47-798	ROBERTS ANGELINA R/WES J	16447 E FAIRVIEW ST GILBERT 85295
304-47-089B	BRIGHTON FARMS LC	RR 3 BOX 3019 ROOSEVELT UT 84066 *
304-47-087	ALLEN DAVID B	16517 E FAIRVIEW ST GILBERT 85295
304-47-389A	BOWMAN TROY S/CRYSTAL S	16531 E FAIRVIEW ST GILBERT 85295
304-47-391	STURGEON PETER/SARAH	16547 E FAIRVIEW ST GILBERT 85295

* Mailing Address

Note: Tankersley South does not require an individual lot to serve adjacent properties based on the proposed waterline alignment.



APPENDIX G

Preliminary Estimates of Cost



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

WATERLINE TANKERSLEY REPLACEMENT
Land & Easement Value Table

August 14, 2017



Printed: 8/11/2017

Location	Lot Size (AC)	Zoning	List Price	Days Listed	Real Property Value per SF	Easement Value per SF	Miles to Project
3032 E Kesler Ln	1.1	SF-43	\$ 310,000	30	\$ 6.71	\$ 2.24	0.1
16650 E Elgin St	1.1	RU-43	\$ 225,000		\$ 4.74	\$ 1.58	0.3
2608 E Claxton Rd	1.0	SF-35	\$ 294,500		\$ 6.76	\$ 2.25	0.8
15511 E Willis Road	2.5	Comm	\$ 765,000	403	\$ 7.02	\$ 2.34	1.0
2633 E Oriole Dr	1.0	SF-10	\$ 275,000		\$ 6.31	\$ 2.10	1.0
0 S 161 Street	1.1	SF-43	\$ 300,000	130	\$ 6.50	\$ 2.17	1.4
14547 E Pecos Road	5.0	Comm	\$ 1,300,000	14	\$ 5.97	\$ 1.99	2.1
19824 S Higley Road	2.3	R-43	\$ 349,000	80	\$ 3.48	\$ 1.16	2.6
21821 S Val Vista Road	2.3	R-43	\$ 399,900	40	\$ 4.03	\$ 1.34	3.9
15915 E Queen Creek Road	10.5	R-35	\$ 3,161,442	353	\$ 6.91	\$ 2.30	3.9
14540 E Willis Road	4.7	R-43	\$ 850,000	178	\$ 4.15	\$ 1.38	4.2
7705 S Higley Road	9.7	SF-15	\$ 1,200,000	228	\$ 2.84	\$ 0.95	4.8
1765 E Camina Plata Court	1.0	SF-43	\$ 299,900	153	\$ 6.75	\$ 2.25	4.9
1766 E Camina Plata Court	1.0	SF-43	\$ 299,900	153	\$ 6.68	\$ 2.23	4.9
2321 E Escondido Place	1.0	SF-43	\$ 289,000	54	\$ 6.63	\$ 2.21	5.5
1745 S 131st Street	1.0	SF-43	\$ 223,900	68	\$ 5.14	\$ 1.71	5.6
25002 S 182nd Place	0.9	R1-35	\$ 299,000	68	\$ 7.46	\$ 2.49	8.0
00 E Twin Acres Court	1.1	R-43	\$ 225,000	194	\$ 4.61	\$ 1.54	8.8
1096 E Melody Avenue	1.2	Comm	\$ 410,000	28	\$ 7.98	\$ 2.66	11.4

Average Rural/Single Family: \$ 5.61 \$ 1.87
Average Commercial: \$ 6.99 \$ 2.33

Sources (7/18/2017):

Keller Williams Realty:

https://www.arizonarealestatesource.com/results-gallery/?city=9225&gclid=CjwKCAjw47bLBRBkEiwABh-PkZSvfx6Hjt0vWpOfhh3weUsvPZRizS38FJz5D3bO-jqWdsxS_K_EBoCnQQAvD_BwE&proptype=VC&sort=importdate&source=adwords&status=A

Zillow:

https://www.zillow.com/homes/for_sale/Gilbert-AZ/pmf,pf_pt/land_type/4888_rid/globalrelevanceex_sort/33.3046,-111.709586,33.241164,-111.790352_rect/13_zm/1_rs/



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

WATERLINE TANKERSLEY NORTH REPLACEMENT
Engineer's Opinion of Cost - Easement Research & Acquisition

August 14, 2017



Printed: 8/11/2017

Easement	Zoning	Length (FT)	Minimum Width (FT)	Area (SF)	Real Property Value per SF	Easement Value per SF	Easement Acquisition Cost	Legal Descriptions & Exhibits	Number of Lots	Lots Research \$750/Lot	Cost
1N	SF-43	280	12	3,360	\$ 5.61	\$ 1.87	\$ 6,280	\$ 1,200	4	\$ 3,000	\$ 10,480
E. Geronimo Ct./ E. Kessler Ln./ S. 116th St.	SF-43/RU-43	2,286	12	27,432	\$ 5.61	\$ 1.87	\$ 51,273	\$ 1,200	22	\$ 16,500	\$ 68,973
E. Elgin St./ S. 16th St.	RU-43	1,925	12	23,100	\$ 5.61	\$ 1.87	\$ 43,176	\$ 1,200	20	\$ 15,000	\$ 59,376
16104-16119 E. Farview St.	RU-43	659	12	7,908	\$ 5.61	\$ 1.87	\$ 14,781	\$ 1,200	6	\$ 4,500	\$ 20,481

Total Cost: **\$ 159,309**

Assumptions

1. Easement Value = 1/3 of Real Property Value
2. Easement Width = 12' for 8-inch waterlines per Section 7.8.3.14 of the 2015 *Town of Gilbert Public Works and Engineering Standards*
3. Legal Descriptions & Exhibits = \$1,200 per Easement
4. The Town of Gilbert will coordinate recordation of easements



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

WATERLINE TANKERSLEY NORTH REPLACEMENT
Engineer's Opinion of Cost - Waterline Replacement

August 14, 2017



Printed: 8/11/2017

Item Description	Quantity	Unit	Unit Price	Total
AC Pavement Removal & Replacement	4,059	SY	\$ 35	\$ 142,065
Asphalt Slurry Seal Coat	35,178	SY	\$ 3	\$ 105,534
Pavement Striping and Marking, Removal and Restoration	1	LS	\$ 1,500	\$ 1,500
Misc. Removals and Other Work	1	LS	\$ 50,000	\$ 50,000
Landscape and Irrigation Removal and Restoration	1	LS	\$ 10,000	\$ 10,000
Abandon Existing Waterline with Grout Fill	12,860	LF	\$ 4	\$ 51,440
Abandon Fire Hydrant	1	EA	\$ 800	\$ 800
DIP Vertical Realignment	5	EA	\$ 5,000	\$ 25,000
Connection to Existing Waterline	9	EA	\$ 3,000	\$ 27,000
Water Service Connection with Meter, Box, and Cover	169	EA	\$ 1,500	\$ 253,500
Copper Service (Customer Side)	169	EA	\$ 4,000	\$ 676,000
Fire Hydrant with 6" C900 Connection	30	EA	\$ 3,500	\$ 105,000
8" C900 Waterline	13,531	LF	\$ 55	\$ 744,205
8" Gate Valve, B & C, M.A.G. 391, Type C	20	EA	\$ 1,800	\$ 36,000
8" x 8" Tee	1	EA	\$ 800	\$ 800
12" x 8" Tapping Sleeve, Valve, Box and cover	3	EA	\$ 5,000	\$ 15,000
16" x 8" Tapping Sleeve, Valve, Box and cover	4	EA	\$ 8,000	\$ 32,000
Special Concrete Details (Thrust Collar)	1	LS	\$ 1,500	\$ 1,500
A. Subtotal				\$ 2,277,344
B. General Conditions		8% of A		\$ 182,188
C. Permitting		3% of (A+B)		\$ 73,786
D. Bonds, Insurance, Sales Tax		5% of (A+B)		\$ 122,977
E. Engineering Design		10% of (A+B+D)		\$ 258,251
F. Contingency		20% of (A+B+D+E)		\$ 568,152
G. Total		A+B+C+D+E+F		\$ 3,482,697



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

WATERLINE TANKERSLEY NORTH REPLACEMENT
Engineer's Opinion of Cost - ACP Waterline Replacement

August 14, 2017



Printed: 8/11/2017

Item Description	Quantity	Unit	Unit Price	Total
AC Pavement Removal & Replacement	2,388	SY	\$ 35	\$ 83,580
Curb and Gutter Removal & Replacement	18	LF	\$ 40	\$ 720
Sidewalk Removal & Replacement	126	SF	\$ 14	\$ 1,764
Asphalt Slurry Seal Coat	36,616	SY	\$ 4	\$ 146,464
Pavement Striping and Marking, Removal and Restoration	1	LS	\$ 3,000	\$ 3,000
Traffic Control	1	LS	\$ 40,000	\$ 40,000
Misc. Removals and Other Work	1	LS	\$ 50,000	\$ 50,000
Landscape and Irrigation Removal and Restoration	1	LS	\$ 10,000	\$ 10,000
Abandon Existing Waterline with Grout Fill	7,164	LF	\$ 3	\$ 21,492
Abandon Fire Hydrant	3	EA	\$ 800	\$ 2,400
DIP Vertical Realignment	3	EA	\$ 5,000	\$ 15,000
Connection to Existing Waterline	8	EA	\$ 3,000	\$ 24,000
Fire Hydrant with 6" C900 Connection	3	EA	\$ 3,500	\$ 10,500
12" C900 Waterline	7,164	LF	\$ 80	\$ 573,120
12" Gate Valve, B & C, M.A.G. 391, Type C	12	EA	\$ 3,000	\$ 36,000
12" x 12" Tee	2	EA	\$ 1,200	\$ 2,400
12" x 8" Reducer	1	EA	\$ 800	\$ 800
Special Concrete Details (Thrust Collar)	1	LS	\$ 1,500	\$ 1,500
A. Subtotal				\$ 1,022,740
B. General Conditions	8% of A			\$ 81,819
C. Permitting	3% of (A+B)			\$ 33,137
D. Bonds, Insurance, Sales Tax	5% of (A+B)			\$ 55,228
E. Engineering Design	10% of (A+B+D)			\$ 115,979
F. Contingency	20% of (A+B+D+E)			\$ 255,153
G. Total	A+B+C+D+E+F			\$ 1,564,056



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

WATERLINE TANKERSLEY SOUTH REPLACEMENT
Engineer's Opinion of Cost - Easement Research & Acquisition

August 14, 2017



Printed: 8/11/2017

Easement	Zoning	Length (FT)	Minimum Width (FT)	Area (SF)	Real Property Value per SF	Easement Value per SF	Easement Acquisition Cost	Legal Descriptions & Exhibits	Number of Lots	Lots Research \$750/Lot	Cost
1SA	SF-43	300	12	3,600	\$ 5.61	\$ 1.87	\$ 6,729	\$ 1,200	2	\$ 1,500	\$ 9,429
1SB	Comm/Office	700	12	8,400	\$ 6.99	\$ 2.33	\$ 19,572	\$ 1,200	1	\$ 750	\$ 21,522
2S	SF-43	1,250	12	15,000	\$ 5.61	\$ 1.87	\$ 28,036	\$ 1,200	5	\$ 3,750	\$ 32,986
3S	SF-43	420	12	5,040	\$ 5.61	\$ 1.87	\$ 9,420	\$ 1,200	2	\$ 1,500	\$ 12,120
4S	SF-43	110	12	1,320	\$ 5.61	\$ 1.87	\$ 2,467	\$ 1,200	2	\$ 1,500	\$ 5,167
5S	SF-43	350	12	4,200	\$ 5.61	\$ 1.87	\$ 7,850	\$ 1,200	5	\$ 3,750	\$ 12,800
E. Longhorn Dr./ E. Wyatt Way/ S. 157th Pl.	Comm/Office	3,194	12	38,328	\$ 6.99	\$ 2.33	\$ 89,305	\$ 1,200	15	\$ 11,250	\$ 101,755
S. 157th St.	SF-43	1,086	12	13,032	\$ 5.61	\$ 1.87	\$ 24,358	\$ 1,200	10	\$ 7,500	\$ 33,058
S. 157th Way	SF-43	1,114	12	13,368	\$ 5.61	\$ 1.87	\$ 24,986	\$ 1,200	11	\$ 8,250	\$ 34,436
S. 158th St.	SF-43	1,334	12	16,008	\$ 5.61	\$ 1.87	\$ 29,920	\$ 1,200	10	\$ 7,500	\$ 38,620
S. 159th St.	SF-43	1,178	12	14,136	\$ 5.61	\$ 1.87	\$ 26,421	\$ 1,200	10	\$ 7,500	\$ 35,121
S. 159th St. (RWCD)	Comm/Office	586	12	7,032	\$ 6.99	\$ 2.33	\$ 16,385	\$ 1,200	1	\$ 750	\$ 18,335
E. Maplewood St.	SF-43	1,250	12	15,000	\$ 5.61	\$ 1.87	\$ 28,036	\$ 1,200	14	\$ 10,500	\$ 39,736
E. Melrose St.	SF-43	1,268	12	15,216	\$ 5.61	\$ 1.87	\$ 28,440	\$ 1,200	17	\$ 12,750	\$ 42,390
E. Claxton Ave.	SF-43	291	12	3,492	\$ 5.61	\$ 1.87	\$ 6,527	\$ 1,200	3	\$ 2,250	\$ 9,977

Total Cost: \$ 447,452

Assumptions

1. Easement Value = 1/3 of Real Property Value
2. Easement Width = 12' for 8-inch waterlines per Section 7.8.3.14 of the 2015 Town of Gilbert Public Works and Engineering Standards
3. Legal Descriptions & Exhibits = \$1,200 per Easement
4. The Town of Gilbert will coordinate recordation of easements



Town of Gilbert Project No.: WA118
GHD Project No.: 11136654

WATERLINE TANKERSLEY SOUTH REPLACEMENT
Engineer's Opinion of Cost - Waterline Replacement

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Item Description	Quantity	Unit	Unit Price	Total
AC Pavement Removal & Replacement	6,203	SY	\$ 35	\$ 217,105
Asphalt Slurry Seal Coat	53,759	SY	\$ 3	\$ 161,278
Pavement Striping and Marking, Removal and Restoration	1	LS	\$ 1,500	\$ 1,500
Misc. Removals and Other Work	1	LS	\$ 50,000	\$ 50,000
Landscape and Irrigation Removal and Restoration	1	LS	\$ 10,000	\$ 10,000
Abandon Existing Waterline with Grout Fill	20,289	EA	\$ 4	\$ 81,156
Abandon Fire Hydrant	26	EA	\$ 800	\$ 20,800
DIP Vertical Realignment	8	EA	\$ 5,000	\$ 40,000
Connection to Existing Waterline	10	EA	\$ 3,000	\$ 30,000
Water Service Connection with Meter, Box, and Cover	204	EA	\$ 1,500	\$ 306,000
Copper Service (Customer Side)	204	EA	\$ 4,000	\$ 816,000
Fire Hydrant	26	EA	\$ 3,500	\$ 91,000
8" C900 Waterline	21,519	LF	\$ 55	\$ 1,183,545
12" C900 Waterline	1,784	LF	\$ 80	\$ 142,720
8" Gate Valve, B & C, M.A.G. 391, Type C	30	EA	\$ 1,800	\$ 54,000
12" Gate Valve, B & C, M.A.G. 391, Type C	3	EA	\$ 3,000	\$ 9,000
8" x 8" Tee	1	EA	\$ 800	\$ 800
16" x 8" Tapping Sleeve, Valve, Box and cover	8	EA	\$ 8,000	\$ 64,000
16" x 12" Tapping Sleeve, Valve, Box and cover	1	EA	\$ 10,000	\$ 10,000
Special Concrete Details (Thrust Collar)	1	LS	\$ 1,500	\$ 1,500
A. Subtotal				\$ 3,290,404
B. General Conditions		8% of A		\$ 263,232
C. Permitting		3% of (A+B)		\$ 106,609
D. Bonds, Insurance, Sales Tax		5% of (A+B)		\$ 177,682
E. Engineering Design		10% of (A+B+D)		\$ 373,132
F. Contingency		20% of (A+B+D+E)		\$ 820,890
G. Total		A+B+C+D+E+F		\$ 5,031,949